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MODAL SPLIT ANALYSIS
FOR THE 2 HOUR 7-9 A.M. PEAK PERIOD
IN METROPOLITAN TORONTO

KATES, PEAT, MARWICK & CO.

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IN METROPOLITAN TORONTO

Prepared for

The Metropolitan Toronto Planning Board

for use in the

1980 Transit Priority Studies

Metro Toronto

by

Kates, Peat, Marwick & Co.

Transportation Division

Toronto, Ontario

July 1967

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MODAL SPLIT ANALYSIS

FOR THE 2 HOUR 7-9 A.M. PEAK PERIOD

IN METROPOLITAN TORONTO

A INTRODUCTION

This report describes the calibration and testing of a series of diversion curve modal split relationships, which will be employed to forecast ridership on proposed alternative rapid transit facilities for the year 1980.

The calibration procedure described herein was undertaken for two purposes: (1) to ensure that the relationships were developed from the best available description of network characteristics; (2) to include new concepts with respect to vehicle parking costs and level-of-service definitions, as more specifically referenced herein, in the section entitled "Description of Input Data".

The report is divided into the following sections:

Introduction

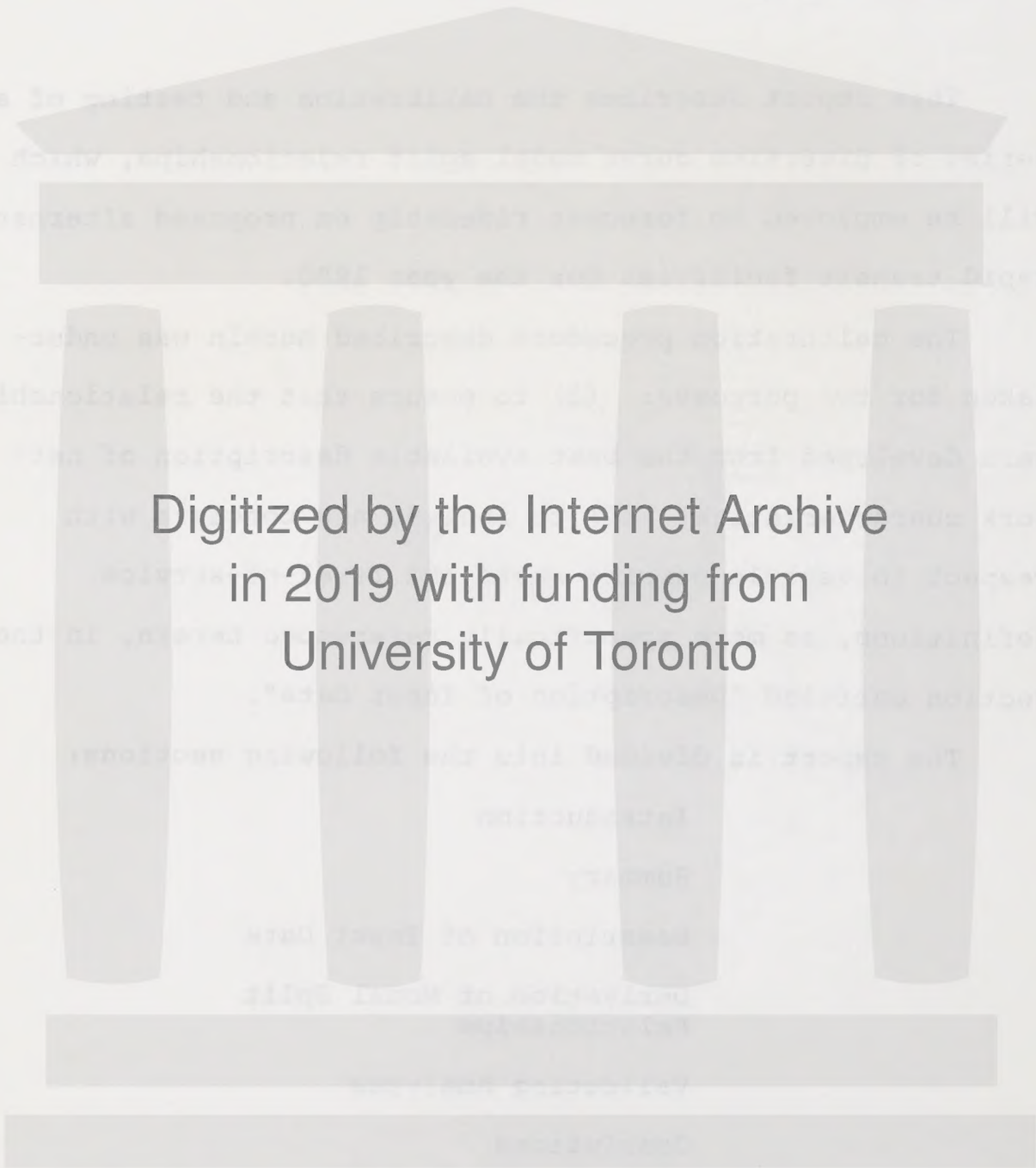
Summary

Description of Input Data

Derivation of Modal Split Relationships

Validating Analyses

Conclusions



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SUMMARY

The modal split relationships are used to estimate the percentage of total trips between an origin and destination which will travel by public transit. Employing estimates of the vehicle and transit characteristics which describe travel between each origin-destination pair of zones, and the economic status of the trip maker at the origin, the likely split of total trips between origin and destination is computed. The percentage modal split, computed as described above, for each origin-destination pair of zones is then applied to the total person trip movements between each origin and destination to determine the final synthesis of the estimated transit usage.

The development and calibration of these relationships has been undertaken to provide a technique capable of patronage estimates on several alternate rapid transit facilities in Metropolitan Toronto. These estimates will be made for the year 1980 in order to establish construction priority and warrants among the rapid transit alternatives.

A detailed analysis of these calibrated relationships has proved that they are capable of accurately replicating the modal choice preferences exhibited in the 1964 Home Interview Survey. Furthermore, a test applied to the Bloor Street subway east of Yonge Street provided estimates of patronage for 1966, which closely resembled actual ground counted patronage for the 7-9 AM peak period.

C DESCRIPTION OF INPUT DATA

The following sources of data were employed in calibrating the diversion curves:

Data		Source
Trip Patterns by Mode	-	the 1964 Home Interview Survey
Economic Status of the Trip Maker	-	from the average worker incomes reported in the 1964 Home Interview Survey
Origin-Destination Travel Times and Costs by Mode	-	the 1964 vehicle and transit networks used in the calibration of the Traffic Prediction Model
Automobile Parking Costs	-	developed from an economic analysis of downtown Toronto Parking costs
Automobile Occupancy Rates	-	from the occupancy rates reported in the 1964 Home Interview Survey at the zone of destination
Origin-Destination Level-of-Service (Convenience Characteristics)	-	only the transit level-of-service characteristics were employed, as derived from the 1964 calibration transit network

A more specific description of the above sources of data follows:

C.1 1964 Home Interview Survey

The trip patterns by mode were obtained from a Home Interview Survey conducted in 1964 jointly for the Metropolitan

Toronto Planning Board and the Metropolitan Toronto and Region Transportation Study by Kates, Peat, Marwick & Co.* The trip file provided the basic information about how people actually travelled within the Metropolitan Toronto area in 1964.

Since the Modal Split relationships were developed to determine the mode choice between private automobile and public transit (T.T.C.) in the Metropolitan Toronto area, for the 7-9 A.M. peak period, the following guidelines were employed in selecting trips from the 1964 Home Interview Survey file:

(a) Only trips within the limits of Metropolitan Toronto and originating within the time period of 6:54 a.m. to 9:06 a.m. were considered.

(b) All trip purposes were grouped into one purpose category.

(c) Trips by private auto or by transit (TTC) were considered. Trips by regional bus (Grey Coach, Colonial, etc.), commuter rail and school bus modes of travel were not considered.

(d) Captive and non-captive trips were grouped together.

Using the selection procedure described above, there were some 473,213 total person trips selected for this analysis.

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* Formerly Traffic Research Corporation

C.2 Economic Status

Total household annual income by zone was obtained from the Home Interview Survey. This figure was divided by the number of workers in each household to provide an estimate of the per worker annual income, which was used as the single measure of the economic status for each study zone.

C.3 Travel Time

Vehicle and transit door-to-door travel times were obtained from the 1964 Calibration vehicle and transit networks. The vehicle times were derived under free flow travel conditions, except that urban and suburban expressways were considered to operate at 35 and 45 mph. respectively. The vehicle times also included a parking delay time of 6.0 minutes for each destination zone within the CBD area and 3.0 minutes in all other destination zones.

The transit times were also derived under free flow conditions and represented the minimum travel time via the T.T.C.

C.4 Travel Cost

The automobile door-to-door travel costs included operating costs (gas, oil, maintenance) and parking costs. The operating costs varied according to the operating speed and averaged approximately 3¢ to 4¢ per mile. The parking costs were developed from an economic analysis of land values, as related to employment density. These parking costs were considered to realistically represent the potential half-daily parking charge which would be perceived by the downtown trip maker,

about to choose his mode of travel. Figure 1 displays graphically the parking charges assigned in the downtown core, inner fringe and outer fringe (reference also Appendix A for a parking cost tabulation by zone).

The total cost of a trip by automobile was derived from a summation of operating cost plus parking cost (where applicable), and a division of this total by an auto occupancy factor of 1.30 to reflect person trip costs by automobile.

The total cost of a trip by transit consisted of the T.T.C. fares based on the rate schedule of 1964.

C.5 Level-of-Service

The level-of-service or convenience is a measure of the excess, or non-travelling time spent during the course of the trip. For trips by transit, level-of-service is the summation of all walking, waiting and transfer time required to complete the trip. In considering this variable in the choice of travel mode, the transit level-of-service varies significantly according to the frequency of transit service and the trip length, while the vehicle level-of-service remains fairly constant for all vehicle trips. Hence for this analysis, only the transit level-of-service characteristics were included in the calibration of the Modal Split relationships.

A computer program was written to summarize the travel data from the Home Interview Survey and the trip characteristics described previously. This summarized data was stored on magnetic tape for input to the modal split analysis.

D DERIVATION OF MODAL SPLIT RELATIONSHIPS

Having selected the significant parameters which affect modal choice, it was necessary to stratify each of the parameters into a series of ranges, each range displaying reasonably uniform modal split characteristics. For example, as described later herein, the income of the trip maker was separated into five ranges, each of the five ranges displaying distinct characteristics with respect to choice of travel mode. Furthermore, each range had to contain a sufficient number of observations to provide a sound basis for the establishment of a separate diversion curve.

The stratification of each parameter into a series of ranges was a trial and error procedure. As an aid in defining the ranges, the absolute variation of modal split with respect to the full range of each parameter (income, cost ratio, service ratio, and travel time ratio) was plotted, as shown in Figures 2 to 5. These figures show that there is a distinct relationship between each of the parameters and the choice of travel mode, and further, that each parameter is significant in describing the conditions which relate to modal choice.

As a further aid in this stratification process, the frequency distribution of the number of observations within each parameter was plotted, as shown in Figures 6 to 9.

Several trials were necessary to establish the final

ranges for each parameter. Each trial consisted of the following sequential steps:

(1) Specify parameter ranges;

(2) Define modal split diversion curves to fit the data contained in each of the selected parameter ranges;

(3) Using the modal split diversion curves defined above and the total person survey trip distribution, estimate the split by mode of the total trips in each of the ranges. This computation employs the modal split block of the Traffic Prediction Model.

(4) Compare the results obtained from the above computation with the modal split rates observed in the Home Interview Survey.

A series of adjustments to the parameter ranges and the diversion curves, between each trial, resulted in the following final parameter ranges, which displayed good agreement with the modal preferences contained in the Home Interview Survey:

Income:	$0-3499
	$3500-$4749
	$4750-$5999
	$6000-$7249
	$7250 +
Cost Ratio:	0.00-0.30
	0.30-0.55
	0.55-1.00
	1.00 +

Level of Service:	0-10 minutes 10-16 minutes 16 + minutes
Travel Time Ratio:	0.00-0.70 0.70-1.00 1.00-1.30 : (equal ranges of 0.30) : 2.80-3.10 3.10 +

The final modal split relationships employing the above stratification of the determinant parameters, are shown in Figure 10.

Following this final stratification of the modal split parameters, a series of tests was conducted to validate the results of this simulation procedure. These tests are fully described herein, in the following section.

E VALIDATING ANALYSES

A series of comparative analyses were conducted following the final stratification of the parameters and subsequent derivation of the modal split diversion curves. These analyses compare the modal split preferences recorded in the 1964 Home Interview Survey, with the simulated modal split resulting from the application of the modal split relationships to the 1964 Home Interview Survey total person (not stratified by mode) trip file. By employing the same trip patterns in both cases (from the 1964 Home Interview Survey), in one case stratified by mode, we are able to absolutely measure the ability of the modal split relationships to reproduce the modal choice preferences exhibited in the Home Interview Survey.

The comparative analyses are listed below:

(1) Modal Split rates by generation and attraction for the calibration zone system and a superzone system.

(2) Transit trip length frequency distribution.

(3) Vehicle and transit trip interchanges on a superzone basis.

(4) Passenger volumes on the Yonge-University subway system.

(5) Transit volumes crossing screenlines within Metropolitan Toronto.

These analyses, as described in more detail below, provided a comprehensive check on the validity of the calibrated modal split curves.

E.1 Comparison of Trips Generation by Calibration Zone

The survey trip file showed that 180,651 transit person and 357,923 vehicle person trips were generated within the Metropolitan Toronto Planning Area. Applying the calibrated modal split curves to the survey total person trip file resulted in a split of this file into 180,700 transit person trips and 357,874 vehicle person trips within Metropolitan Toronto.

Areas of over-simulation and under-simulation of transit trips were examined on a zonal basis to determine if any distinct geographic biases had resulted in the Metropolitan Planning Area. As displayed graphically in Figure 11, those zones appearing as unshaded displayed negligible deviation from the transit trip generation rates recorded in the Home Interview Survey. The zones which are shaded represent areas experiencing an under- or over-simulation of greater than 10% and generating more than 300 transit trips during the 7-9 AM peak period.

It was considered that the somewhat random distribution of areas of over-simulation and under-simulation as shown in Figure 11 demonstrated that the modal split relationships did not produce a significant areal bias.

E.2 Comparison of Trip Generation and Attraction by Superzone

The comparison of vehicle and transit trip generation

and attraction rates by superzone verified that the simulated modal split rates were in close agreement with observed rates (reference Table I and figure 13). Although some small differences in modal split rate by superzone still existed in the suburban areas, it was felt that this deviation was insignificant considering the relatively small number of trips involved.

E.3 Comparison of Transit Trip Length Frequency Curves

The simulated and survey transit trip length frequency distributions were compared for all trips originating within Metropolitan Toronto. Figure 14 displays this comparison graphically, and shows that good agreement occurs between the simulated and the survey trip length distributions for the full range of travel times. The average simulated transit trip length is 31.9 minutes versus the average survey value of 31.3 minutes.

E.4 Comparison of Superzone Interchanges

Simulated and observed transit interchanges to the Downtown and fringe CBD areas were examined (Table II). In general, there was no consistent pattern of over- or under-simulation. Most of the noticeable fluctuations between simulated and observed values occurred with interchanges of small magnitude, where survey values have fairly large confidence limits. For this reason, the modal split for interchanges throughout Metropolitan Toronto was considered to be quite acceptable.

To demonstrate the accuracy of the simulated modal split

for specific interchanges, vehicle and transit person interchanges to the CBD core (superzone 15), and representative superzones in the inner CBD fringe (superzone 14) and the outer CBD fringe (superzone 17) were tabulated. This data is shown in Tables III to V and is also represented graphically in Figures 15 to 17. Although some fluctuations can be found in the percent modal split in some interchanges, these predominate for very small interchanges where there is the least confidence in the survey values.

Generally, there was a tendency to slightly over-simulate transit interchanges from suburban areas to the CBD core. However, the number of trips involved in this over-simulation was found to be relatively small, and was considered to be insignificant in relation to the very close agreement between larger interchanges originating in the inner and outer CBD fringe.

E.5 Subway Volumes

As anticipated from the close agreement between simulated and observed transit superzone interchanges, the transit assignment of simulated and observed transit trip tables to the transit link network used in the 1964 Calibration Study, produced very satisfactory correlation between simulated and observed transit link volumes on the Yonge Street-University Avenue subway line (reference figure 18). Both inbound and outbound volumes compared very favourably, but again, the

slight over-simulation of transit trips in the suburbs was apparent at Eglinton Station where there was an over-simulation of approximately 3% in the inbound direction.

E.6 Screenline Crossings

Transit volumes crossing screenlines along four cordons were used to examine movements to the Downtown area. Generally, there was very close agreement between the simulated and the survey screenline volumes. Again a slight over-simulation of transit trips from the suburbs was apparent, but this was considered relatively unimportant compared to the very satisfactory agreement between larger screenline volumes crossing the CBD and Intermediate Cordons (Table VI and Figure 19).

The general oversimulation experienced in the suburban to downtown movements is inherently a result of the averaging process whereby characteristics influencing modal split are related to observed travel data. The characteristics and the attractiveness of the transit service provided by the express bus and subway in the Yonge Street corridor are significantly different than those provided by a suburban bus line running at a 15 minute headway. While these characteristics are, for the most part, described by the modal split parameters, there are some features of a high service rapid transit facility which are not embodied in the existing modal split parameters. Hence, the relationships do not precisely replicate both the low service and high service extremes, causing slight oversimulation of the suburban low service facilities and

slight undersimulation of high service facilities, such as the Yonge Street Subway. As previously mentioned, this over-simulation of suburban facilities and undersimulation of high service urban facilities is minor and is certainly within the limits of data variability.

F CONCLUSIONS

As demonstrated by the tests performed, the Modal Split diversion curves calibrated on this project are capable of accurately replicating the modal choice preferences described in the 1964 Home Interview Survey.

As a further test on these relationships, patronage estimates were made on the Bloor Street subway (inbound) east of Yonge Street. These patronage estimates employed the trip patterns displayed in the 1964 Home Interview Survey, the modal split relationships calibrated in this study and the manual technique for estimating transit demand, esentially as described in the previous report.* The results of this test are displayed in Figure 20.

Considering that the 2 hour ground counts were obtained by factoring 3 hour ground counts and that the simulated volumes (from the manual technique) were adjusted to reflect 1966 population estimates, the agreement between the ground counts and the simulated volumes is exceptionally good. Of nine link volume comparisons, six links, including the maximum load point, display differences of less than ten percent and eight of less than fifteen percent.

It is, therefore, a basic conclusion of this report

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* Manual Technique for Estimating Transit Demand in a Selected Travel Corridor - Prepared for the Metropolitan Toronto Planning Board by Kates, Peat, Marwick & Co. (Traffic Research Corporation) (1966).

that the calibrated modal split diversion curves developed in this study represent valid and effective relationships for estimating transit usage within the Metropolitan Toronto Planning Area. Furthermore, these relationships can be used for the forthcoming 1980 Transit Priority Studies, with the confidence that the estimating accuracy of this procedure is quite satisfactory for planning purposes.

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TABLE 1

COMPARISON OF SURVEY & SIMULATED TRIPS GENERATED AND ATTRACTED BY MODE

	GENERATORS								ATTRACTORS							
	SURVEY				SIMULATED				SURVEY				SIMULATED			
	VEHICLE	TRANSIT	TOTAL	M.S.	VEHICLE	TRANSIT	TOTAL	M.S.	VEHICLE	TRANSIT	TOTAL	M.S.	VEHICLE	TRANSIT	TOTAL	M.S.
1	21984	5489	27473	19.9	21047	6428	27475	23.4	26916	4471	31387	14.2	25918	5472	31390	17.4
2	18752	1649	20401	8.1	17927	2474	20401	12.1	7666	1357	9023	15.0	7948	1076	9024	11.9
3	19115	2608	21723	12.0	19324	2398	21722	11.0	16477	1659	18136	9.2	16478	1660	18138	9.2
4	17209	3290	20499	16.0	14985	5515	20500	26.9	15335	3159	18494	17.1	14785	3711	18496	20.1
5	12984	3351	16335	20.5	12377	3956	16333	24.2	12150	2945	15095	19.5	11919	3176	15096	21.0
6	11185	7402	18587	39.8	11946	6642	18588	35.7	11174	4981	16155	30.8	11810	4344	16154	26.9
7	10814	10712	21526	49.8	10153	11374	21527	52.8	6581	4219	10800	39.1	6899	3903	10802	36.1
8	6851	13456	20307	66.3	7900	12409	20309	61.1	12186	9765	21951	44.5	11950	9997	21947	45.8
9	8892	14080	22972	61.3	9324	13647	22971	59.4	11869	8940	20809	43.0	11542	9268	20810	44.5
10	14533	15351	29884	51.4	14854	15032	29886	50.3	7860	4663	12523	37.2	8199	4322	12521	34.5
11	9358	4787	14145	33.8	9492	4653	14145	32.9	14240	3896	18136	21.5	13885	4250	18135	23.4
12	15134	6106	21240	28.7	16228	5012	21240	23.4	8684	1628	10312	15.8	8929	1383	10312	13.4
13	19543	13337	32880	41.3	20399	12478	32877	38.0	11666	5955	17621	33.8	12586	5036	17622	28.6
14	9953	9197	19150	48.0	10277	8872	19149	46.3	11886	8537	20423	41.8	12367	8056	20423	39.4
15	6465	9306	15771	59.0	7335	8439	15774	53.5	71966	84761	156727	54.1	71251	85479	156730	54.5
16	10993	13585	24578	55.3	11046	13532	24578	55.1	18943	13228	32171	41.1	19251	12918	32169	40.2
17	20241	19620	39861	49.2	20537	19325	39862	48.5	11599	4451	16050	27.7	11514	4537	16051	28.3
18	11636	9679	21315	45.4	11210	10107	21317	47.4	11975	3410	15385	22.2	11011	4376	15387	28.4
19	16061	2478	18539	13.4	14751	3786	18537	20.4	14489	1800	16284	11.1	13628	2659	16287	16.3
20	7785	494	7779	6.4	7390	389	7779	5.0	2843	305	3148	9.7	2977	171	3148	5.4
21	20875	3403	24278	14.0	20432	3844	24276	15.8	13195	1764	14959	11.8	13270	1690	14960	11.3
22	17065	5182	22247	23.3	16389	5856	22245	26.3	11157	2591	13748	18.8	11105	2642	13747	19.2
23	15189	2598	17787	14.6	15411	2378	17789	13.4	6031	1137	7168	15.9	6667	501	7168	7.0
24	166908	23693	190601	12.3	170754	19845	190599	10.4	152136	21231	173367	12.2	155597	17767	173364	10.2
	489025	200853	689878	29.1	491488	198391	689879	28.8	489024	200853	689877	29.1	491486	198394	689881	28.8

TABLE II OBSERVED AND SIMULATED TRANSIT PERSON INTERCHANGES FOR 24 ORIGINS TO MAJOR DESTINATIONS IN CENTRAL TORONTO.

ORIGIN	DESTINATION									
	6		7		8		9		10	
	OBS.	SIM.	OBS.	SIM.	OBS.	SIM.	OBS.	SIM.	OBS.	SIM.
1	60	113	205	311	147	548	159	182	135	89
2	48	49	68	169	134	121	47	127	24	24
3	48	167	94	31	42	46	36	79	36	45
4	75	196	0	113	44	299	192	228	39	174
5	243	521	0	54	57	117	108	209	109	166
6	968	594	338	363	645	659	534	476	391	363
7	565	587	1240	920	1117	879	710	932	265	192
8	352	219	509	493	1637	1463	1979	1540	543	375
9	458	361	427	438	1664	1513	998	946	438	393
10	985	693	793	458	1072	1000	1226	1581	854	937
11	594	310	0	20	100	241	118	207	278	334
12	0	30	37	26	39	130	0	65	0	17
13	77	72	0	39	202	245	252	348	224	217
14	44	48	57	24	229	130	254	234	552	258
15	237	151	175	175	443	458	736	532	224	188
16	0	24	43	43	819	708	822	602	182	105
17	145	69	119	92	878	802	305	534	147	134
18	0	18	28	23	259	148	246	145	109	84
19	82	13	39	21	0	90	0	33	31	27
20	0	1	0	4	0	0	0	6	0	3
21	0	41	0	14	101	118	43	40	58	71
22	0	0	48	39	98	171	0	52	0	67
23	0	36	0	0	0	41	54	49	0	23
24	0	31	0	32	36	70	122	122	26	37

TABLE II CONT'D.

ORIGIN	DESTINATION									
	14		15		16		17		18	
	OBS.	SIM.	OBS.	SIM.	OBS.	SIM.	OBS.	SIM.	OBS.	SIM.
1	74	106	1696	1790	58	164	52	37	32	53
2	24	59	661	1082	68	91	0	8	0	11
3	36	94	411	535	0	40	0	8	0	71
4	65	143	776	1003	51	126	0	15	0	47
5	98	155	1104	876	57	54	0	38	0	46
6	350	261	2425	1919	256	192	49	41	105	53
7	373	254	5315	6110	363	414	0	80	53	41
8	314	305	5615	5525	1356	1143	46	126	92	84
9	464	388	6822	6994	688	588	175	102	120	150
10	815	821	6728	6422	545	529	36	68	245	246
11	357	268	1914	1814	46	151	31	78	96	55
12	421	401	2995	2412	140	204	43	36	80	109
13	1199	1152	8236	7432	510	424	146	131	586	356
14	453	528	6061	6033	287	305	0	13	164	298
15	586	428	3775	4210	1239	850	545	369	79	201
16	454	403	6545	6416	2870	2906	428	322	434	532
17	824	670	9912	10033	3197	2918	1998	1518	549	740
18	716	816	6182	6463	479	632	326	377	441	551
19	123	319	1277	1829	55	174	140	123	76	159
20	53	22	161	270	0	19	0	6	0	8
21	246	116	953	1502	102	227	134	345	76	170
22	216	129	1969	2383	681	544	120	274	73	254
23	156	96	1430	1096	128	156	148	88	49	72
24	121	122	1798	1331	51	65	33	34	60	68

TABLE III

COMPARISON OF SURVEY AND SIMULATED PERSON TRIP INTERCHANGES TO DOWNTOWN (SUPERZ.15)

SUPER ZONE	VEHICLE PERSONS		TRANSIT PERSONS		TOTAL PERSONS		MODAL SPLIT	
	SURVEY	SIMULATED	SURVEY	SIMULATED	SURVEY	SIMULATED	SURVEY	SIMULATED
1	3063	2968	1696	1790	4759	4758	35.6	37.6
2	4294	3874	661	1082	4955	4956	13.3	21.8
3	1871	1747	411	535	2282	2282	18.0	23.4
4	1830	1603	776	1003	2606	2606	29.8	38.5
5	950	1178	1104	876	2054	2054	53.7	42.6
6	1045	1551	2425	1919	3470	3470	69.9	55.3
7	2847	2052	5315	6110	8162	8162	65.1	74.9
8	1134	1224	5615	5525	6749	6749	83.2	81.9
9	1634	1462	6822	6994	8456	8456	80.7	82.7
10	2088	2395	6728	6422	8816	8817	76.3	72.8
11	1769	1870	1914	1814	3683	3684	52.0	49.2
12	2660	3243	2995	2412	5655	5655	53.0	42.7
13	5057	5861	8236	7432	13293	13293	62.0	55.9
14	3364	3392	6061	6033	9425	9425	64.3	64.0
15	1787	1352	3775	4210	5562	5562	67.9	75.7
16	1787	1916	6545	6416	8332	8332	78.6	77.0
17	4677	4556	9912	10033	14589	14589	67.9	68.8
18	4023	3741	6182	6463	10205	10204	60.6	63.3
19	4499	3947	1277	1829	5776	5776	22.1	31.7
20	1776	1667	161	270	1937	1937	8.3	13.9
21	4798	4250	953	1502	5751	5752	16.6	26.1
22	3584	3170	1969	2383	5553	5553	35.5	42.9
23	3509	3843	1430	1096	4939	4939	29.0	22.2
24	7920	8387	1798	1331	9718	9718	18.5	13.7

TABLE IV

COMPARISON OF SURVEY AND SIMULATED PERSON TRIP INTERCHANGES TO SUPERZONE 14

SUPER-ZONE	VEHICLE PERSONS		TRANSIT PERSONS		TOTAL PERSONS		MODAL SPLIT	
	SURVEY	SIMULATED	SURVEY	SIMULATED	SURVEY	SIMULATED	SURVEY	SIMULATED
1	266	234	74	106	340	340	21.8	31.2
2	338	303	24	59	362	362	6.6	16.3
3	365	307	36	94	401	401	9.0	23.4
4	346	268	65	143	411	411	15.8	34.8
5	318	261	98	155	416	416	23.5	37.2
6	199	288	350	261	549	549	63.8	47.5
7	86	206	373	254	459	460	81.0	55.2
8	188	196	314	305	502	501	62.5	60.8
9	156	232	464	388	620	620	74.8	62.6
10	498	493	815	821	1313	1314	62.0	62.5
11	228	317	357	268	585	585	61.0	45.9
12	915	935	421	401	1336	1336	31.6	30.0
13	1560	1606	1199	1152	2759	2758	43.5	41.8
14	563	488	453	528	1016	1016	44.6	52.0
15	157	315	586	428	743	743	79.0	57.5
16	286	338	454	403	740	741	61.3	54.4
17	604	758	824	670	1428	1428	57.7	46.9
18	990	889	716	816	1706	1705	42.0	47.9
19	1370	1175	123	319	1493	1494	8.2	21.4
20	255	285	53	22	308	307	17.2	7.2
21	381	511	246	116	627	627	39.2	18.5
22	272	359	216	129	488	488	44.3	26.5
23	358	418	156	96	514	514	30.4	18.7
24	1186	1185	121	122	1307	1307	9.3	9.3

TABLE V

COMPARISON OF SURVEY AND SIMULATED PERSON TRIP INTERCHANGES TO SUPERZONE 17

SUPER ZONE	VEHICLE PERSONS		TRANSIT PERSONS		TOTAL PERSONS		MODAL SPLIT	
	SURVEY	SIMULATED	SURVEY	SIMULATED	SURVEY	SIMULATED	SURVEY	SIMULATED
1	115	130	52	37	167	167	31.1	22.2
2	72	64	0	8	72	72	0.0	11.1
3	110	102	0	8	110	110	0.0	7.3
4	78	63	0	15	78	78	0.0	19.2
5	140	102	0	38	140	140	0.0	37.1
6	94	102	49	41	143	143	34.3	38.7
7	138	58	0	80	138	138	0.0	58.0
8	174	93	46	126	220	219	20.9	57.3
9	0	73	175	102	175	175	100.0	58.4
10	126	93	36	68	162	161	22.4	42.0
11	268	221	31	78	299	299	10.4	26.1
12	272	279	43	36	315	315	13.6	11.4
13	373	387	146	131	519	518	38.1	25.3
14	53	40	0	13	53	53	0.0	24.5
15	285	460	545	369	830	829	65.5	44.5
16	1024	830	428	622	1452	1452	29.5	42.8
17	2455	2935	1998	1518	4453	4453	44.3	33.5
18	789	738	326	377	1115	1115	29.2	33.8
19	661	678	140	123	801	801	17.5	15.4
20	137	132	0	6	137	138	0.0	4.4
21	1537	1326	134	345	1671	1671	8.0	20.6
22	1256	1102	120	274	1376	1376	8.7	19.9
23	662	722	148	88	810	810	18.3	10.9
24	780	779	33	34	813	813	4.1	4.1

TABLE VI

COMPARISON OF SURVEY AND SIMULATED INBOUND TRANSIT PASSENGERS CROSSING THE CBD, INTERMEDIATE, SUBURBAN AND HIGHWAY CORDONS

CORDON	SCREENLINE NO.	TRANSIT	
		SURVEY	SIMULATED
CBD	1	230	93
	2	9969	10047
	3	41393	42512
	4	14738	14905
	TOTAL	66330	67557
Intermediate	5	20616	21748
	6	6289	7388
	7	34275	35071
	8	24592	24628
	TOTAL	85772	88835
Suburban	9	4033	5662
	10	1165	1560
	11	3756	5447
	12	31143	32086
	13	1170	864
	14	4615	4482
	TOTAL	45882	50101
Highway	15	1902	1786
	16	637	877
	17	1756	2610
	18	5999	5796
	19	1228	1217
	20	1975	2313
	TOTAL	13497	14599

TABLE VII SURVEY VEHICLE PERSON TRIP GENERATION BY CALIBRATION ZONE

ZONE	ZONE (I)	ZONE (I+1)	ZONE (I+2)	ZONE (I+3)	ZONE (I+4)	ZONE (I+5)	ZONE (I+6)	ZONE (I+7)
I = 1	510.	491.	138.	205.	22[illegible].	2[illegible]8.	157.	62.
I = [illegible]	3[illegible]0.	469.	2[illegible]8.	[illegible]1.	[illegible]2.	2[illegible]5.	7.	10.
I = 17	126.	0.	6.	220.	5[illegible].	2[illegible]4.	3[illegible]1.	213.
I = 25	34.	45.	19.	39.	[illegible]5.	2[illegible]7.	8[illegible]1.	39.
I = 33	7195.	4[illegible]5.	1048.	6[illegible]0.	77[illegible].	[illegible]593.	64[illegible]1.	3712.
I = 41	2232.	3201.	3[illegible]2.	3[illegible]59.	2[illegible]85.	15[illegible]6.	12[illegible]0.	3536.
I = 49	814.	2982.	4272.	7130.	1[illegible]0.	1047.	716.	2157.
I = 57	1792.	1132.	1066.	2[illegible]16.	[illegible]05.	[illegible]45.	1[illegible]26.	1479.
I = 6	1099.	199.	107[illegible].	1[illegible]1[illegible].	[illegible]12.	658.	2[illegible]34.	549.
I = 73	293.	517.	645.	1074.	197.	21[illegible]0.	3844.	856.
I = 81	630.	184[illegible].	1249.	199[illegible].	11[illegible]2.	1998.	830.	382.
I = 89	757.	357.	2[illegible]6.	140.	156.	362.	344.	115.
I = 97	279.	434.	481.	1495.	[illegible]27.	[illegible]23.	709.	753.
I = 105	1016.	2100.	1481.	193.	30[illegible].	752.	656.	254.
I = 113	246.	628.	307.	1188.	36[illegible].	394.	7[illegible]0.	825.
I = 121	928.	1951.	[illegible]23.	1939.	159[illegible].	537.	500.	4[illegible]8.
I = 129	785.	2135.	209.	69[illegible].	1606.	763.	[illegible]272.	599.
I = 137	1101.	1129.	466.	[illegible].	17[illegible].	946.	1[illegible]67.	1347.
I = 145	1165.	508.	49.	602.	11[illegible].	[illegible]121.	1408.	1508.
I = 153	1439.	[illegible].	4792.	0.	3[illegible]3[illegible].	[illegible]071.	4043.	2118.
I = 161	0.	2001.	947.	71.	[illegible]05.	1243.	1[illegible]58.	2986.
I = 169	1169.	1122.	15[illegible]4.	13[illegible]0.	4[illegible]67.	[illegible]294.	23[illegible]9.	1998.
I = 177	955.	[illegible]7[illegible].	3[illegible]63.	[illegible]62.	11[illegible].	[illegible]595.	0.	[illegible]2[illegible]2.
I = 185	2533.	[illegible]04[illegible].	17[illegible]8.	144[illegible].	2104.	[illegible]08.	14[illegible]7.	1445.
I = 193	2[illegible]93.	1224.	10[illegible]8.	1611.	1374.	924.	1611.	1133.
I = 201	1215.	146[illegible].	1[illegible]65.	146[illegible].	1[illegible]14.	464.	1[illegible]62.	[illegible]671.
I = 209	[illegible]167.	15[illegible]8.	1712.	[illegible]052.	2361.	1974.	1[illegible]54.	3[illegible]09.
I = 217	1123.	31[illegible].	[illegible]66.	[illegible]414.	10[illegible].	2359.	7[illegible]1.	[illegible]0.
I = 225	337.	1333.	[illegible]50.	117[illegible].	97[illegible].	12[illegible]3.	[illegible]6[illegible]8.	1846.
I = 233	563.	2061.	[illegible]95[illegible].	[illegible]449.	19[illegible]8.	2936.	14[illegible]7.	1814.
I = 241	0.	[illegible]01.	[illegible]23.	695.	[illegible]77.	1[illegible]0.	878.	1099.
I = 249	2391.	2132.	4463.	[illegible]474.	19[illegible].	[illegible]62.	[illegible]18.	0.
I = 257	499.	0.	[illegible]87.	0.	[illegible]9[illegible].	727.	14[illegible]6.	13[illegible]2.
I = 265	[illegible]96.	176[illegible].	29[illegible]8.	109[illegible].	1[illegible]2[illegible].	2[illegible]32.	25[illegible]8.	411.
I = 273	1442.	1094.	1614.	[illegible]01.	19[illegible].	1[illegible]9.	195.	199.
I = 281	228.	[illegible]72.	[illegible]86.	[illegible]97.	1[illegible]6[illegible].	[illegible]96.	1[illegible]27.	[illegible]01.
I = 289	1438.	1432.	1[illegible]37.	1919.	75[illegible].	[illegible]76.	2[illegible]26.	1179.
I = 297	[illegible]728.	1709.	[illegible]44.	2[illegible]5.	[illegible]07.	1[illegible]23.	1403.	1936.
I = 305	2787.	700.	1149.	259[illegible].	32[illegible].	2[illegible]00.	3972.	73.
I = 313	0.	116[illegible].	[illegible]75.	1[illegible]4[illegible].	14[illegible]4.	[illegible]80[illegible].	16[illegible]0.	[illegible]01.
I = 321	1014.	[illegible]073.	2159.	588.	2355.	3[illegible]08.	2775.	4147.
I = 329	2349.	5[illegible]44.	[illegible]45.	[illegible]19.	[illegible]22[illegible].	1574.	[illegible]407.	[illegible]42.
I = 337	1817.	172[illegible].	[illegible]200.	2991.	2141.	1099.	2[illegible]95.	3214.
I = 345	[illegible]2[illegible]5.	[illegible]05[illegible].	[illegible]95[illegible].	13[illegible]0.	1711.	[illegible]2[illegible]8.	30[illegible]7.	14[illegible]7.
I = 353	[illegible]432.	1997.	1[illegible]6[illegible].	[illegible]764.	1[illegible]51.	[illegible]61.	[illegible]6[illegible].	[illegible]60.
I = 361	266.	[illegible]853.	497.	[illegible]21.	[illegible]63.	704.	12[illegible]8.	447.
I = 369	371.	[illegible]2.	109.	1105.	41[illegible].	0.	0.	0.

TABLE VIII SURVEY VEHICLE PERSON TRIP ATTRACTION BY CALIBRATION ZONE

ZONE	ZONE(I)	ZONE(I+1)	ZONE(I+2)	ZONE(I+3)	ZONE(I+4)	ZONE(I+5)	ZONE(I+6)	ZONE(I+7)
I = 1	1000.	[illegible]	45.	128.	218.	419.	0.	31.
I = [illegible]	247.	767.	530.	0.	46.	353.	67.	44.
I = [illegible]	142.	7.	29.	747.	182.	195.	542.	202.
I = [illegible]	59.	7.	0.	0.	95.	106.	1155.	577.
I = [illegible]	1024.	707.	1416.	1333.	2374.	2670.	1360.	3340.
I = [illegible]	8065.	5241.	1655.	1542.	4768.	3462.	8209.	1720.
I = [illegible]	[illegible]27.	331.	5034.	1581.	523.	462.	641.	721.
I = [illegible]	2040.	961.	712.	903.	509.	372.	248.	553.
I = [illegible]	373.	237.	1220.	540.	204.	2461.	503.	2878.
I = [illegible]	135.	814.	299.	347.	457.	4322.	2040.	118.
I = [illegible]	583.	576.	402.	1637.	2309.	906.	976.	266.
I = [illegible]	271.	54.	287.	1.	19.	92.	262.	45.
I = [illegible]	23.	305.	171.	888.	192.	567.	190.	265.
I = [illegible]	2624.	864.	1399.	115.	189.	127.	501.	251.
I = [illegible]	347.	104.	112.	984.	581.	1511.	938.	856.
I = [illegible]	[illegible]58.	76[illegible].	2789.	1362.	431.	153.	187.	726.
I = [illegible]	1224.	811.	294.	285.	1595.	462.	561.	587.
I = [illegible]	615.	532.	155.	44.	209.	1596.	1055.	1842.
I = [illegible]	517.	4467.	1097.	639.	135.	1353.	523.	2207.
I = [illegible]	5720.	0.	1903.	0.	2078.	503.	1357.	2314.
I = [illegible]	0.	695.	360.	77.	0.	1050.	3576.	1235.
I = [illegible]	2944.	4695.	2592.	693.	504.	1477.	642.	205.
I = [illegible]	598.	975.	1586.	776.	1292.	1579.	295.	149[illegible].
I = [illegible]	1036.	994.	1172.	1247.	586.	3328.	1397.	1512.
I = [illegible]	[illegible]34.	[illegible].	[illegible]983.	1761.	[illegible]91.	[illegible]61.	1604.	856.
I = [illegible]	1924.	1008.	1448.	2785.	1554.	1228.	[illegible]50.	703.
I = [illegible]	1926.	[illegible]51.	671.	[illegible]442.	[illegible]781.	2140.	[illegible]37.	954.
I = [illegible]	[illegible]592.	[illegible]79[illegible].	[illegible]03.	758.	[illegible].	1749.	750.	1860.
I = [illegible]	[illegible]5[illegible]4.	77[illegible].	1[illegible]30.	[illegible]49[illegible].	2151.	14[illegible]8.	542.	1163.
I = [illegible]	1051.	482.	1079.	1311.	184[illegible].	[illegible]731.	1294.	[illegible]767.
I = [illegible]	57.	[illegible]357.	7445.	1773.	6269.	4234.	1202.	2086.
I = [illegible]	[illegible]2034.	936.	1394.	1313.	[illegible]32.	[illegible]4371.	14903.	0.
I = [illegible]	7677.	[illegible].	4599.	0.	5346.	2335.	720.	1696.
I = [illegible]	1244.	918.	1428.	729.	[illegible]946.	1260.	1469.	169.
I = [illegible]	360.	655.	[illegible]42.	124.	113.	2054.	4740.	[illegible]512.
I = [illegible]	[illegible]4202.	[illegible]1072.	[illegible]023.	[illegible]3677.	2016.	130.	[illegible]959.	1269.
I = [illegible]	642.	[illegible]874.	1274.	[illegible]957.	[illegible]65[illegible].	[illegible]945.	760.	515.
I = [illegible]	[illegible]3297.	525.	536.	[illegible]792.	1104.	1958.	1321.	1077.
I = [illegible]	1236.	79.	[illegible]750.	[illegible]903[illegible].	[illegible]20[illegible].	943.	1451.	[illegible]7.
I = [illegible]	275.	953.	761.	[illegible]1470.	1341.	[illegible]732.	[illegible]691.	[illegible]2306.
I = [illegible]	815.	[illegible]4439.	[illegible]2649.	103.	[illegible]807.	1543.	1[illegible]04.	1084.
I = [illegible]	[illegible]3116.	2123.	465.	564.	1393.	1559.	[illegible]2036.	[illegible]2136.
I = [illegible]	647.	[illegible]3224.	1900.	699.	[illegible]51[illegible].	[illegible]954.	[illegible]627.	1043.
I = [illegible]	1233.	1921.	1054.	769.	[illegible]42[illegible].	[illegible]413.	1746.	316.
I = [illegible]	[illegible]440.	115[illegible].	411.	[illegible]858.	1479.	[illegible]4[illegible]61.	[illegible]681.	10[illegible].
I = [illegible]	227.	[illegible]783.	174.	217.	[illegible]257.	[illegible]231.	143.	[illegible]424.
I = [illegible]	117.	[illegible]19[illegible].	[illegible]532.	134.	[illegible]42[illegible].	0.	0.	0.

TOTALS G = [illegible]489030.[illegible] A = [illegible]489030.[illegible]

TABLE IX SURVEY TRANSIT PERSON TRIP GENERATION BY CALIBRATION ZONE

ZONE	ZONE(I)	ZONE(I+1)	ZONE(I+2)	ZONE(I+3)	ZONE(I+4)	ZONE(I+5)	ZONE(I+6)	ZONE(I+7)
I = 1	0.	[illegible]	0.	[illegible]	[illegible]	0.	0.	0.
I = 9	0.	[illegible]	0.	[illegible]	[illegible]	0.	0.	0.
I = 17	0.	[illegible]	[illegible]	[illegible]	[illegible]	0.	0.	0.
I = 25	0.	[illegible]	[illegible]	[illegible]	[illegible]	0.	0.	0.
I = 33	715.	16[illegible].	9e9.	e47.	e6e.	1425.	1e84.	2043.
I = 41	649.	661.	e7e.	783.	e56.	545.	645.	1110.
I = 49	6[illegible]2.	[illegible].	1375.	167.	[illegible].	21.	17.	5[illegible].
I = 57	113.	12[illegible].	e9.	171.	[illegible].	0.	35.	88.
I = 65	93.	13[illegible].	e11.	5[illegible].	2[illegible].	56.	e36.	0.
I = 73	0.	[illegible].	31.	[illegible].	2[illegible].	e82.	4e0.	0.
I = 81	46.	[illegible].	74.	113.	17[illegible].	146.	19.	73.
I = 89	0.	[illegible].	[illegible].	[illegible].	1[illegible].	[illegible].	51.	3e3.
I = 97	e4.	0.	73.	105.	6[illegible].	45.	0.	0.
I = 105	53.	55.	e7.	[illegible].	[illegible].	0.	1e6.	0.
I = 113	38.	7[illegible].	22.	51.	2[illegible].	44.	41[illegible].	137.
I = 121	280.	347.	60.	2e7.	15[illegible].	93.	0.	37.
I = 129	14.	199.	53.	3e.	19e.	185.	94.	0.
I = 137	68.	4[illegible].	0.	321.	3[illegible].	205.	e16.	0.
I = 145	103.	[illegible].	0.	4[illegible].	[illegible].	1044.	3[illegible]6.	204.
I = 153	187.	0.	369.	0.	96[illegible].	190.	45[illegible].	202.
I = 161	0.	e62.	165.	[illegible].	[illegible].	395.	3e6.	699.
I = 169	288.	31[illegible].	347.	384.	1047.	522.	166.	36.
I = 177	0.	57[illegible].	137.	529.	14[illegible].	290.	0.	13[illegible]6.
I = 185	1469.	15[illegible].	1109.	1277.	1e32.	379.	9e1.	909.
I = 193	596.	32[illegible].	541.	2939.	2459.	1252.	3371.	3073.
I = 201	1757.	883.	495.	2456.	1412.	719.	2239.	2216.
I = 209	1072.	1321.	1489.	574.	3[illegible]1.	1966.	437.	63[illegible].
I = 217	177.	36[illegible].	115.	6[illegible].	[illegible].	317.	413.	0.
I = 225	1057.	2055.	1607.	1726.	2123.	1759.	1e7e.	1816.
I = 233	931.	2094.	2726.	1429.	778.	617.	3[illegible]3.	312.
I = 241	230.	137.	3e5.	94[illegible].	1[illegible]9[illegible].	109.	4057.	1757.
I = 249	1952.	1312.	1932.	1814.	1295.	245.	5[illegible]1.	0.
I = 257	577.	[illegible].	547.	[illegible].	1261.	779.	4218.	876.
I = 265	785.	2013.	2407.	623.	91[illegible].	8e3.	11[illegible]2.	0.
I = 273	220.	[illegible]9.	132.	11[illegible].	5e.	0.	171.	245.
I = 281	993.	[illegible]29.	787.	1743.	13[illegible]e.	859.	1299.	543.
I = 289	796.	1517.	1e05.	[illegible]50e.	57[illegible].	319.	302.	139.
I = 297	1158.	641.	192.	137.	52e.	813.	4e35.	2993.
I = 305	2684.	260.	707.	2128.	61.	154.	2e1.	0.
I = 313	23.	16[illegible].	1188.	1221.	2e42.	2[illegible]e5.	1406.	528.
I = 321	291.	383.	423.	1131.	3[illegible]3[illegible].	3583.	2024.	1680.
I = 329	773.	39[illegible].	0.	[illegible].	1[illegible]7[illegible].	469.	3[illegible]0.	146.
I = 337	790.	[illegible]91.	501.	305.	21[illegible].	0.	e[illegible]4.	1072.
I = 345	450.	163.	6[illegible]4.	67.	30[illegible].	315.	2e9.	227.
I = 353	313.	41[illegible].	13e.	375.	6[illegible]7.	27.	0.	0.
I = 361	28.	38[illegible].	61.	56.	51.	42.	141.	27.
I = 369	0.	[illegible].	0.	[illegible].	2[illegible].	0.	0.	0.

TABLE X SURVEY TRANSIT PERSON TRIP ATTRACTION BY CALIBRATION ZONE

ZONE	ZONE(I)	ZONE(I+1)	ZONE(I+2)	ZONE(I+3)	ZONE(I+4)	ZONE(I+5)	ZONE(I+6)	ZONE(I+7)
I = 1	287.	0.	0.	0.	0.	0.	0.	0.
I = 9	0.	36.	0.	0.	0.	0.	0.	0.
I = 17	36.	0.	0.	0.	0.	14.	90.	0.
I = 25	0.	0.	0.	0.	0.	0.	150.	0.
I = 33	178.	0.	412.	137.	217.	1001.	204.	869.
I = 41	966.	1427.	533.	194.	1263.	410.	4428.	491.
I = 49	225.	30.	1043.	103.	0.	0.	0.	0.
I = 57	155.	47.	0.	42.	56.	49.	50.	0.
I = 65	26.	0.	131.	20.	0.	138.	43.	19.
I = 73	138.	0.	0.	0.	16.	444.	241.	0.
I = 81	0.	29.	0.	206.	147.	38.	8.	0.
I = 89	0.	0.	0.	0.	0.	51.	10.	0.
I = 97	110.	143.	20.	73.	83.	95.	0.	0.
I = 105	55.	92.	140.	0.	0.	0.	0.	0.
I = 113	0.	0.	33.	47.	0.	60.	39.	106.
I = 121	286.	150.	514.	400.	225.	0.	30.	0.
I = 129	17.	0.	0.	19.	107.	0.	0.	119.
I = 137	28.	0.	0.	0.	321.	33.	67.	108.
I = 145	46.	54.	29.	13.	0.	123.	65.	594.
I = 153	886.	0.	190.	0.	663.	0.	362.	303.
I = 161	0.	0.	0.	0.	130.	95.	533.	582.
I = 169	465.	271.	969.	42.	224.	223.	84.	61.
I = 177	128.	116.	116.	41.	541.	160.	33.	242.
I = 185	132.	203.	467.	956.	274.	603.	262.	462.
I = 193	763.	97.	967.	1453.	539.	587.	768.	653.
I = 201	1127.	584.	563.	1103.	710.	453.	470.	400.
I = 209	1687.	151.	633.	744.	638.	601.	514.	241.
I = 217	1524.	1234.	0.	75.	150.	149.	0.	969.
I = 225	2833.	644.	894.	1667.	2510.	515.	253.	701.
I = 233	638.	159.	1053.	774.	483.	66.	619.	469.
I = 241	65.	1466.	9283.	1752.	4368.	3510.	1102.	1460.
I = 249	982.	522.	406.	721.	65.	3441.	24104.	0.
I = 257	13413.	0.	4757.	0.	4676.	1756.	743.	687.
I = 265	593.	608.	416.	443.	174.	65.	562.	28.
I = 273	0.	0.	136.	0.	0.	620.	7698.	1813.
I = 281	4001.	667.	644.	2524.	2683.	169.	546.	1569.
I = 289	158.	2278.	360.	2235.	439.	169.	105.	147.
I = 297	522.	77.	241.	461.	305.	732.	851.	870.
I = 305	528.	31.	1088.	699.	42.	98.	174.	0.
I = 313	39.	373.	1003.	2320.	677.	141.	1624.	248.
I = 321	27.	618.	315.	82.	406.	652.	660.	129.
I = 329	221.	479.	0.	0.	587.	127.	465.	272.
I = 337	172.	125.	248.	175.	49.	62.	98.	251.
I = 345	329.	157.	592.	180.	83.	0.	474.	19.
I = 353	83.	361.	139.	167.	339.	48.	0.	0.
I = 361	0.	48.	0.	0.	0.	0.	0.	18.
I = 369	48.	0.	0.	0.	0.	0.	0.	0.

TOTALS - O = 200854.6 A = 200854.6

TABLE XI SURVEY MODAL SPLIT BY ZONE OF DEPARTURE

ZONE	VEHICLE (V)	TRANSIT (Q)	V+Q	PERCENT V	PERCENT Q
129	784.9	14.5	799.4	98.2	1.8
130	2135.0	194.8	2329.8	91.6	8.4
131	208.7	53.5	262.2	79.6	20.4
132	690.1	36.3	726.4	95.0	5.0
133	1606.3	198.4	1804.7	89.0	11.0
134	763.3	184.7	947.9	80.5	19.5
135	2272.0	94.0	2366.1	96.0	4.0
136	599.2	.0	599.2	100.0	.0
137	1101.0	87.8	1188.8	92.6	7.4
138	1128.3	39.6	1167.9	96.6	3.4
139	466.1	.0	466.1	100.0	.0
140	.0	320.9	320.9	.0	100.0
141	172.8	38.3	211.1	81.9	18.1
142	945.9	204.6	1150.4	82.2	17.8
143	1686.7	216.9	1903.6	88.6	11.4
144	1366.7	.0	1366.7	100.0	.0
145	1165.3	103.0	1268.3	91.9	8.1
146	507.7	.1	507.7	100.0	.0
147	48.8	.0	48.8	100.0	.0
148	601.6	41.7	643.4	93.5	6.5
149	119.4	.0	119.4	100.0	.0
150	2120.1	1043.6	3163.8	67.0	33.0
151	1408.4	306.0	1714.4	82.2	17.8
152	1507.7	204.0	1711.7	88.1	11.9
153	1438.7	187.1	1625.8	88.5	11.5
154	.0	.0	.0	.0	.0
155	4791.5	369.5	5161.0	92.8	7.2
156	.0	.0	.0	.0	.0
157	3333.3	366.2	3699.5	90.1	9.9
158	3070.7	190.4	3261.2	94.2	5.8
159	4043.4	451.0	4494.4	90.0	10.0
160	2118.3	201.6	2320.0	91.3	8.7
161	.0	.0	.0	.0	.0
162	2000.7	262.4	2263.1	88.4	11.6
163	966.9	164.6	1111.5	85.2	14.8
164	71.5	.0	71.5	100.0	.0
165	205.2	.0	205.2	100.0	.0
166	1243.2	295.0	1538.1	80.8	19.2
167	1657.9	325.8	1983.7	83.6	16.4
168	2985.7	699.4	3685.2	81.0	19.0
169	1169.4	288.1	1457.5	80.2	19.8
170	1122.3	311.9	1434.1	78.3	21.7
171	1584.1	397.5	1981.5	79.9	20.1
172	1379.9	383.7	1763.6	78.2	21.8
173	4367.0	1047.0	5414.0	80.7	19.3
174	2294.4	522.2	2816.6	81.5	18.5
175	2309.2	165.8	2475.0	93.3	6.7
176	1997.5	36.4	2033.9	98.2	1.8
177	954.9	.0	954.9	100.0	.0
178	3673.6	571.9	4245.5	86.5	13.5
179	3883.1	137.0	4020.1	96.6	3.4
180	683.1	528.7	1211.9	56.4	43.6
181	1158.0	164.9	1323.0	87.5	12.5
182	1555.1	290.0	1845.1	84.3	15.7
183	.0	.0	.0	.0	.0
184	2261.6	1305.9	3567.4	63.4	36.6
185	2532.8	1469.1	4001.9	63.3	36.7
186	2048.0	1525.7	3573.8	57.3	42.7
187	1738.5	1109.5	2847.9	61.0	39.0
188	1447.9	1276.7	2724.6	53.1	46.9
189	2107.6	1231.6	3339.2	63.1	36.9

ZONE	VEHICLE (V)	TRANSIT (Q)	V+Q	PERCENT V	PERCENT Q
190	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
191	497.3	[illegible]	[illegible]	[illegible]	[illegible]
192	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
193	[illegible]	[illegible]	[illegible]	79.4	[illegible]
194	[illegible]	[illegible]	[illegible]	79.3	[illegible]
195	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
196	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
197	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
198	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
199	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
201	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
202	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
203	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
204	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
205	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
206	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
207	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
208	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
209	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
210	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
211	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
212	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
213	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
214	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
215	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
216	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
217	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
218	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
219	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
220	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
221	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
222	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
223	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
224	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
225	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
226	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
227	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
228	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
229	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
230	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
231	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
232	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
233	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
234	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
235	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
236	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
237	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
238	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
239	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
240	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
241	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
242	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
243	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
244	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
245	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
246	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
247	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
248	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
249	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
251	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

ZONE	VEHICLE (V)	TRANSIT (Q)	V+Q	PERCENT V	PERCENT Q
251	445.6	1431.7	1877.3	69.8	31.2
252	477.8	151.5	629.3	75.7	24.3
253	1572.5	1291.7	2864.2	54.9	45.1
254	252.1	244.7	496.8	50.8	49.2
255	617.6	521.3	1138.9	54.2	45.8
256	.0	.0	.0	.0	.0
257	498.9	577.2	1076.1	46.4	53.6
258	.0	.0	.0	.0	.0
259	287.5	346.7	634.2	45.3	54.7
260	.0	.0	.0	.0	.0
261	899.0	1261.6	2159.6	41.6	58.4
262	794.9	715.5	1509.4	49.3	51.7
263	1437.6	2217.1	3654.6	38.8	61.2
264	1,61.9	975.8	2537.7	60.9	39.1
265	595.8	787.2	1381.0	43.1	56.9
266	1746.3	2012.7	3782.1	46.8	53.2
267	947.5	2426.7	3374.2	28.2	71.8
268	1197.6	622.2	1819.8	67.2	32.8
269	1225.8	905.7	2725.5	66.7	33.3
270	2632.0	867.4	3499.4	75.2	24.7
271	2527.9	1102.1	3630.0	69.6	30.4
272	411.2	.0	411.2	100.0	.0
273	1442.4	722.2	1664.7	86.8	13.2
274	1131.5	87.5	1219.	92.8	7.2
275	1614.4	132.2	1746.6	92.4	7.6
276	891.3	111.1	997.4	87.3	12.7
277	180.0	59.7	249.7	72.3	22.7
278	178.4	.0	189.4	100.0	.0
279	194.9	174.7	369.6	53.3	46.7
280	191.2	245.1	444.3	44.8	55.2
281	822.3	998.8	1821.1	18.7	81.3
282	871.6	825.7	1697.2	44.9	55.1
283	426.4	783.7	1213.1	35.2	61.8
284	697.0	1745.1	2442.1	34.1	65.0
285	1060.3	1355.1	2422.3	44.1	55.1
286	699.9	854.1	1554.1	44.1	55.2
287	1626.7	1298.7	2925.4	55.6	44.4
288	501.2	542.9	1044.1	48.0	52.0
289	1437.8	795.1	2233.9	64.4	35.6
290	1432.1	1517.1	2949.2	48.6	51.4
291	1334.7	1806.8	3141.7	42.5	57.5
292	1918.6	2507.8	4426.4	43.3	56.7
293	754.5	576.8	1330.9	56.7	43.3
294	876.0	319.1	1195.1	73.3	26.7
295	2625.7	361.7	2987.7	87.9	12.1
296	1179.4	139.7	1319.1	89.5	10.5
297	3736.4	1159.7	4896.1	76.3	23.7
298	1708.9	641.5	2350.4	72.7	27.3
299	644.4	191.7	1136.1	83.1	16.9
300	429.4	139.3	439.7	68.3	31.7
301	833.4	821.7	1132.9	53.4	46.4
302	1121.4	917.	1839.3	55.7	44.3
303	1483.1	2833.5	4031.6	34.7	65.3
304	1479.9	992.1	2498.5	59.3	41.7
305	3747.2	654.4	4401.6	50.5	49.1
306	701.4	269.5	980.9	72.9	27.1
307	1141.9	747.4	1889.3	61.8	38.1
308	2431.5	2121.7	4753.2	55.0	45.0
309	321.6	61.7	383.1	84.1	15.9
310	2499.9	154.4	2654.3	94.2	5.8
311	3472.3	781.2	4253.7	83.4	16.6

ZONE	VEHICLE (V)	TRANSIT (Q)	V+Q	PERCENT V	PERCENT Q
312	7[illegible].7	.0	7[illegible].7	100.0	.0
313	.0	2[illegible].0	[illegible].0	.0	100.0
314	1[illegible]2.7	1[illegible].[illegible]	[illegible]64.[illegible]	42.1	[illegible]7.[illegible]
315	[illegible]20.1	1[illegible]8.[illegible]	[illegible]1[illegible]3.[illegible]	45.1	54.[illegible]
316	1[illegible]4.4	1[illegible]21.[illegible]	[illegible]67.[illegible]	54.[illegible]	[illegible]5.[illegible]
317	14[illegible]4.2	[illegible]2[illegible].[illegible]	[illegible]66.	[illegible]6.3	[illegible]1.7
318	[illegible]0[illegible]6.8	[illegible]9[illegible].[illegible]	41[illegible].7	49.9	[illegible]1.1
319	1[illegible]20.4	1[illegible]6[illegible].7	[illegible]0[illegible].7	[illegible]2.5	[illegible]7.[illegible]
320	[illegible]01.2	[illegible]2[illegible].[illegible]	142[illegible].7	63.[illegible]	[illegible]7.[illegible]
321	1[illegible]13.5	2[illegible]1.[illegible]	13[illegible].[illegible]	77.7	22.3
322	[illegible]073.1	3[illegible].[illegible]	[illegible]496.[illegible]	[illegible]4.[illegible]	15.[illegible]
323	[illegible]15[illegible].8	[illegible]22.7	[illegible]581.	[illegible]3.[illegible]	16.[illegible]
3[illegible]4	[illegible]57.5	1131.[illegible]	1718.7	34.[illegible]	[illegible]5.[illegible]
325	[illegible]354.8	3[illegible]9.7	55[illegible].[illegible]	[illegible]2.1	[illegible]7.[illegible]
326	[illegible]2[illegible].4	3[illegible]3.[illegible]	[illegible]7[illegible]1.[illegible]	[illegible]7.[illegible]	[illegible]2.[illegible]
327	[illegible]77[illegible].3	[illegible]02[illegible].[illegible]	[illegible]799.[illegible]	[illegible]7.[illegible]	[illegible]2.[illegible]
328	[illegible]14[illegible].5	1[illegible]8[illegible].[illegible]	[illegible]5[illegible]7.[illegible]	[illegible]1.[illegible]	[illegible]8.[illegible]
[illegible]29	[illegible]349.5	77.[illegible]	[illegible]1[illegible]2.[illegible]	75.[illegible]	[illegible]5.[illegible]
330	[illegible]6[illegible]7.9	[illegible]9[illegible].[illegible]	[illegible]6[illegible].	[illegible]3.[illegible]	.[illegible]
331	[illegible]45.0	.[illegible]	[illegible]45.[illegible]	100.0	.[illegible]
332	[illegible]5[illegible].9	.[illegible]	[illegible]1[illegible].[illegible]	100.0	.
333	[illegible]2[illegible].4	1277.[illegible]	[illegible]3[illegible].[illegible]	[illegible]3.[illegible]	[illegible]6.[illegible]
334	[illegible]1[illegible]7.8	[illegible]4[illegible].1	[illegible]02[illegible].[illegible]	[illegible]7.[illegible]	[illegible]2.[illegible]
335	[illegible]407.4	[illegible]8[illegible].4	[illegible]7[illegible].	[illegible]6.1	[illegible]3.[illegible]
336	[illegible]41.6	[illegible]4[illegible].	[illegible]4[illegible].[illegible]	[illegible]0.1	[illegible]9.[illegible]
337	1[illegible]17.0	[illegible]8[illegible].[illegible]	[illegible]61[illegible].[illegible]	69.7	[illegible]0.3
338	1727.7	[illegible]8[illegible].[illegible]	[illegible]21[illegible].[illegible]	78.[illegible]	[illegible]2.[illegible]
339	[illegible]196.7	[illegible]00.[illegible]	[illegible]500.[illegible]	[illegible]8.[illegible]	[illegible]1.[illegible]
340	[illegible]491.0	[illegible]64.	[illegible]755.[illegible]	[illegible]9.1	11.
341	[illegible]141.0	[illegible]1[illegible].[illegible]	[illegible]39[illegible].[illegible]	[illegible]0.9	[illegible].1
342	[illegible]1[illegible].8	.	[illegible]1[illegible].	100.0	.[illegible]
343	[illegible]1[illegible].7	[illegible]8[illegible].	[illegible]97[illegible].[illegible]	70.3	[illegible]9.7
344	7[illegible]13.6	1[illegible]71.7	[illegible]4[illegible]5.[illegible]	75.[illegible]	25.[illegible]
345	[illegible]484.6	[illegible]4[illegible].7	3134.[illegible]	[illegible]5.7	14.3
346	[illegible]2[illegible].3	[illegible]42.[illegible]	[illegible]291.[illegible]	[illegible]8.[illegible]	[illegible]1.[illegible]
347	[illegible]397.9	[illegible]6[illegible].4	[illegible]00[illegible].[illegible]	78.[illegible]	21.[illegible]
348	1[illegible]7[illegible].7	[illegible]1.[illegible]	14[illegible].[illegible]	[illegible]4.1	[illegible].[illegible]
349	1711.0	[illegible]01.[illegible]	[illegible]012.[illegible]	[illegible]5.[illegible]	15.[illegible]
350	[illegible]628.1	[illegible]19.[illegible]	[illegible]947.[illegible]	[illegible]9.[illegible]	[illegible]0.[illegible]
351	3027.0	[illegible]29.4	3256.4	[illegible]3.0	7.0
352	1467.0	[illegible]87.3	[illegible]654.[illegible]	86.6	13.4
353	[illegible]432.3	[illegible]17.[illegible]	[illegible]945.7	[illegible]2.6	17.4
[illegible]54	[illegible]99[illegible].7	[illegible]15.4	[illegible]412.1	[illegible]2.8	17.2
355	[illegible]959.7	[illegible]39.[illegible]	[illegible]1[illegible]7.[illegible]	93.4	[illegible].[illegible]
356	[illegible]783.5	[illegible]37[illegible].[illegible]	[illegible]158.[illegible]	[illegible]8.1	11.[illegible]
357	1[illegible]7[illegible].2	[illegible]65[illegible].[illegible]	[illegible]837.[illegible]	[illegible]3.[illegible]	[illegible]0.[illegible]
358	[illegible]51.3	[illegible]9.[illegible]	[illegible]71[illegible].[illegible]	[illegible]6.[illegible]	[illegible].[illegible]
359	[illegible]3[illegible].1	.	[illegible]6[illegible].[illegible]	100.0	.[illegible]
360	[illegible]1[illegible].5	.[illegible]	[illegible]40.5	100.0	.[illegible]
361	[illegible]66.4	[illegible]7.[illegible]	[illegible]94.[illegible]	[illegible]0.6	[illegible].[illegible]
362	[illegible]6[illegible].0	[illegible]8[illegible].[illegible]	[illegible]235.[illegible]	[illegible]3.[illegible]	11.[illegible]
363	[illegible]91.6	[illegible]1.[illegible]	[illegible]53.[illegible]	[illegible]8.9	11.1
364	[illegible]21.4	[illegible]9.[illegible]	[illegible]77.[illegible]	[illegible]7.7	[illegible].[illegible]
365	[illegible]63.5	[illegible]1.[illegible]	[illegible]14.4	[illegible]4.4	[illegible].[illegible]
366	[illegible]83.6	[illegible]1.[illegible]	[illegible]25.5	[illegible]4.9	[illegible].1
367	1237.5	101.[illegible]	1338.[illegible]	[illegible]2.[illegible]	7.
368	[illegible]47.0	[illegible]7.4	[illegible]74.[illegible]	[illegible]4.[illegible]	[illegible].[illegible]
[illegible]9	[illegible]70.8	.[illegible]	[illegible]70.[illegible]	100.[illegible]	.[illegible]
370	[illegible]1.8	.[illegible]	[illegible]1.	100.0	.[illegible]
371	1[illegible]9.4	.[illegible]	1[illegible].[illegible]	100.0	.[illegible]
372	11[illegible].9	.	11[illegible].[illegible]	100.0	.
373	[illegible]1[illegible].2	[illegible]1.[illegible]	[illegible]4[illegible].[illegible]	[illegible]4.1	[illegible].[illegible]

TABLE XII SIMULATED VEHICLE PERSON TRIP GENERATION BY CALIBRATION ZONE

ZONE	ZONE(I)	ZONE(I+1)	ZONE(I+2)	ZONE(I+3)	ZONE(I+4)	ZONE(I+5)	ZONE(I+6)	ZONE(I+7)
I = 1	510.	491.	136.	205.	225.	288.	157.	62.
I = 9	320.	469.	246.	1.	43.	225.	7.	10.
I = 17	126.	0.	6.	220.	55.	204.	361.	213.
I = 25	34.	42.	19.	39.	89.	257.	611.	38.
I = 33	3407.	612.	1706.	663.	716.	3463.	6163.	3708.
I = 41	1985.	2798.	3152.	3624.	2381.	1429.	1227.	3394.
I = 49	2677.	774.	4248.	2297.	1306.	1026.	725.	2097.
I = 57	1863.	1233.	1127.	2568.	387.	137.	1744.	1454.
I = 65	1124.	336.	1956.	1477.	821.	816.	2151.	540.
I = 73	253.	517.	676.	1074.	222.	2427.	4273.	856.
I = 81	643.	1777.	1320.	2033.	1282.	2061.	846.	456.
I = 89	757.	357.	366.	140.	169.	362.	395.	418.
I = 97	363.	434.	513.	1504.	293.	668.	709.	753.
I = 105	1002.	2156.	1521.	193.	306.	752.	762.	254.
I = 113	280.	691.	218.	1215.	389.	438.	1160.	940.
I = 121	1206.	2283.	424.	2214.	1735.	630.	500.	501.
I = 129	729.	1957.	462.	725.	1547.	861.	2251.	555.
I = 137	1149.	1168.	461.	321.	2[illegible].	953.	1695.	1262.
I = 145	1284.	507.	49.	633.	11[illegible].	2156.	1403.	1372.
I = 153	1477.	1.	787.	1.	319[illegible].	3013.	4169.	2245.
I = 161	0.	2080.	1111.	71.	2[illegible].	1061.	1360.	2593.
I = 169	1108.	1163.	1518.	1481.	4335.	2103.	2174.	1768.
I = 177	827.	3695.	3596.	876.	1087.	1574.	0.	1930.
I = 185	2178.	1473.	2163.	1226.	2376.	607.	1643.	1634.
I = 193	2182.	1352.	1177.	1944.	1893.	936.	1512.	1738.
I = 201	1259.	1241.	763.	1661.	1[illegible].	460.	1703.	2572.
I = 209	2138.	1534.	1589.	2123.	1871.	2[illegible].	1609.	3215.
I = 217	961.	2429.	677.	1041.	1[illegible].	2107.	1113.	62.
I = 225	555.	1229.	776.	1090.	1193.	1056.	906.	1840.
I = 233	690.	1956.	2490.	2715.	2166.	2529.	1262.	1698.
I = 241	138.	213.	436.	722.	52[illegible].	165.	1394.	1266.
I = 249	2535.	2239.	3708.	2102.	1986.	529.	695.	0.
I = 257	460.	0.	931.	0.	782.	650.	1662.	1255.
I = 265	644.	2682.	3541.	1207.	2116.	2776.	2749.	364.
I = 273	1585.	1060.	1554.	815.	204.	128.	163.	135.
I = 281	477.	596.	526.	1287.	1256.	662.	1704.	562.
I = 289	1388.	1354.	1487.	2049.	1006.	871.	2567.	966.
I = 297	3840.	1793.	1036.	325.	728.	824.	1462.	2279.
I = 305	2683.	629.	866.	2453.	381.	2542.	3968.	72.
I = 313	10.	1266.	606.	1265.	1691.	2168.	1596.	1103.
I = 321	739.	1871.	2021.	791.	2591.	2975.	2359.	3987.
I = 329	2471.	4747.	665.	619.	2656.	1513.	2041.	2511.
I = 337	1851.	1902.	1976.	2570.	2299.	1061.	2151.	2695.
I = 345	2735.	1978.	2560.	951.	1705.	2699.	3019.	1563.
I = 353	2481.	2155.	1645.	2704.	2314.	708.	668.	740.
I = 361	294.	2671.	513.	626.	648.	766.	1227.	434.
I = 369	383.	62.	109.	1097.	423.	0.	0.	0.

TABLE XIII SIMULATED VEHICLE PERSON TRIP ATTRACTION BY CALIBRATION ZONE

ZONE	ZONE(I)	ZONE(I+1)	ZONE(I+2)	ZONE(I+3)	ZONE(I+4)	ZONE(I+5)	ZONE(I+6)	ZONE(I+7)
I =	1287.	239.	45.	125.	218.	419.	0.	31.
I = 9	267.	101.	630.	8.	44.	353.	67.	44.
I = 17	178.	7.	29.	747.	182.	209.	632.	202.
I = 25	59.	7.	0.	0.	95.	106.	1284.	532.
I = 33	1071.	697.	1466.	1267.	2127.	2715.	1069.	3190.
I = 41	7255.	2617.	1592.	1497.	4722.	3122.	8794.	1751.
I = 49	1019.	343.	5627.	1644.	923.	452.	618.	641.
I = 57	2124.	999.	702.	867.	556.	408.	276.	521.
I = 65	383.	235.	1265.	796.	203.	2401.	536.	2875.
I = 73	272.	814.	299.	347.	477.	4735.	4266.	118.
I = 81	679.	697.	402.	1800.	2401.	913.	962.	266.
I = 89	271.	58.	267.	1.	1.	143.	271.	55.
I = 97	133.	451.	182.	905.	476.	661.	190.	265.
I = 105	4679.	887.	1527.	115.	187.	127.	561.	251.
I = 113	307.	10 .	149.	985.	0 .	1969.	974.	0 4.
I = 121	1643.	902.	5448.	1746.	697.	153.	216.	712.
I = 129	1162.	73 .	584.	305.	1464.	720.	525.	695.
I = 137	827.	631.	155.	44.	554.	1429.	1162.	1939.
I = 145	562.	440 .	1269.	644.	7 .	1170.	915.	2460.
I = 153	5699.	0.	1520.	.	2415.	677.	1504.	5371.
I = 161	0.	631.	541.	77.	177.	56.	3075.	1378.
I = 169	1884.	4021.	4677.	611.	57 .	1426.	767.	240.
I = 177	457.	988.	1312.	74.	1522.	1467.	294.	1249.
I = 185	779.	193 .	1483.	1505.	866.	2917.	1265.	1424.
I = 193	2754.	571.	2001.	1451.	374.	627.	1466.	856.
I = 201	1615.	988.	1060.	1455.	1611.	1129.	669.	721.
I = 209	2557.	467.	1109.	774.	2994.	1265.	4768.	990.
I = 217	5652.	4857.	304.	591.	3903.	1462.	720.	1783.
I = 225	2682.	803.	995.	1092.	2170.	1177.	469.	1139.
I = 233	1959.	524.	1451.	1574.	2008.	1401.	1466.	1044.
I = 241	62.	4214.	8258.	1683.	5858.	4548.	1459.	1911.
I = 249	1803.	1067.	1493.	1511.	529.	3925.	15320.	0.
I = 257	8722.	0.	4850.	.	5199.	2413.	752.	1598.
I = 265	1152.	1107.	1145.	921.	949.	1139.	1700.	194.
I = 273	344.	422.	360.	124.	117.	1623.	5230.	2043.
I = 281	3232.	975.	734.	4791.	2169.	153.	1173.	1494.
I = 289	562.	3204.	1106.	3294.	1044.	347.	742.	561.
I = 297	3522.	934.	714.	3704.	1014.	1667.	1365.	1268.
I = 305	1271.	9 .	4774.	837.	427.	1010.	1496.	20.
I = 313	244.	522.	1009.	1981.	1218.	857.	1334.	2161.
I = 321	471.	4550.	2543.	124.	896.	1671.	1715.	872.
I = 329	2670.	1997.	485.	564.	1069.	1333.	1877.	1868.
I = 337	665.	1987.	1696.	730.	541.	914.	774.	997.
I = 345	1478.	1899.	1444.	827.	94 .	647.	2144.	320.
I = 353	479.	1430.	459.	914.	2236.	308.	661.	105.
I = 361	227.	759.	159.	201.	246.	248.	141.	426.
I = 369	160.	150.	1520.	134.	214.	0.	0.	0.

TOTALS - O = 491489.5 A = 491489.5

TABLE XIV SIMULATED TRANSIT PERSON TRIP GENERATION BY CALIBRATION ZONE

ZONE	ZONE(I)	ZONE(I+1)	ZONE(I+2)	ZONE(I+3)	ZONE(I+4)	ZONE(I+5)	ZONE(I+6)	ZONE(I+7)
I = 1	0.	0.	0.	0.	0.	0.	0.	0.
I = 9	0.	0.	0.	0.	0.	0.	0.	0.
I = 17	0.	0.	0.	0.	0.	0.	0.	0.
I = 25	0.	0.	0.	0.	0.	0.	0.	1.
I = 33	464.	38.	731.	214.	328.	1535.	1552.	2047.
I = 41	895.	1065.	156.	619.	1062.	652.	648.	1252.
I = 49	538.	204.	1399.	0.	0.	42.	8.	118.
I = 57	102.	27.	27.	114.	0.	8.	117.	113.
I = 65	68.	0.	132.	191.	12.	98.	120.	9.
I = 73	0.	0.	0.	0.	0.	15.	31.	0.
I = 81	33.	69.	2.	76.	42.	83.	3.	0.
I = 89	0.	0.	0.	0.	0.	0.	0.	0.
I = 97	0.	0.	41.	97.	0.	0.	0.	0.
I = 105	68.	0.	187.	0.	0.	0.	0.	0.
I = 113	3.	0.	11.	25.	0.	0.	8.	22.
I = 121	2.	14.	18.	12.	0.	0.	0.	3.
I = 129	70.	378.	0.	0.	458.	87.	115.	44.
I = 137	40.	0.	0.	0.	3.	0.	8.	105.
I = 145	14.	0.	0.	11.	0.	1007.	251.	340.
I = 153	149.	0.	374.	0.	505.	248.	365.	75.
I = 161	0.	183.	0.	0.	0.	538.	614.	1093.
I = 169	349.	271.	454.	283.	1078.	853.	341.	256.
I = 177	127.	550.	422.	330.	238.	271.	0.	1637.
I = 185	1824.	2101.	685.	1498.	961.	761.	795.	720.
I = 193	706.	192.	453.	608.	2437.	1741.	2869.	2469.
I = 201	1663.	1105.	796.	1255.	1217.	502.	1599.	2316.
I = 209	1101.	1385.	1012.	502.	61.	1902.	652.	1026.
I = 217	339.	1107.	304.	1013.	41.	569.	0.	28.
I = 225	9.	2167.	1362.	1910.	1567.	1985.	1059.	1822.
I = 233	804.	2199.	2793.	1163.	587.	1023.	618.	428.
I = 241	93.	126.	471.	915.	806.	804.	1541.	1589.
I = 249	1807.	1905.	2687.	2184.	839.	998.	444.	0.
I = 257	616.	0.	203.	0.	1377.	857.	1943.	983.
I = 265	737.	1100.	1633.	514.	617.	713.	681.	47.
I = 273	78.	99.	193.	102.	41.	61.	203.	310.
I = 281	745.	900.	747.	1355.	1172.	872.	1262.	462.
I = 289	846.	1595.	1655.	2377.	32.	324.	400.	352.
I = 297	1046.	552.	100.	107.	405.	1012.	2556.	2650.
I = 305	2789.	331.	990.	2274.	22.	112.	286.	1.
I = 313	13.	1495.	1256.	1384.	1975.	1977.	1491.	326.
I = 321	566.	585.	560.	928.	3000.	3817.	2460.	1840.
I = 329	651.	1297.	0.	0.	652.	10.	757.	207.
I = 337	756.	314.	524.	786.	65.	37.	627.	1590.
I = 345	399.	273.	447.	535.	50.	244.	237.	131.
I = 353	365.	257.	493.	453.	194.	0.	0.	0.
I = 361	0.	565.	60.	51.	67.	59.	112.	40.
I = 369	8.	0.	0.	11.	19.	0.	0.	0.

TABLE XV SIMULATED TRANSIT PERSON TRIP ATTRACTION BY CALIBRATION ZONE

ZONE	ZONE(I)	ZONE(I+1)	ZONE(I+2)	ZONE(I+3)	ZONE(I+4)	ZONE(I+5)	ZONE(I+6)	ZONE(I+7)
I = 1	0.	0.	0.	0.	0.	0.	0.	0.
I = 9	0.	0.	0.	0.	0.	0.	0.	0.
I = 17	0.	0.	0.	0.	0.	0.	0.	0.
I = 25	0.	0.	0.	0.	0.	0.	0.	46.
I = 33	141.	11.	361.	203.	469.	956.	455.	1089.
I = 41	1776.	156[illegible].	[illegible].	[illegible].	1[illegible].	770.	39[illegible]3.	460.
I = 49	143.	22.	1451.	0.	0.	30.	3.	80.
I = 57	122.	16.	10.	79.	0.	13.	42.	32.
I = 65	16.	2.	62.	64.	0.	219.	50.	23.
I = 73	0.	0.	0.	0.	0.	31.	15.	0.
I = 81	4.	0.	0.	37.	56.	30.	3.	0.
I = 89	0.	0.	0.	1.	1.	0.	0.	0.
I = 97	0.	0.	9.	[illegible].	1.	0.	0.	0.
I = 105	0.	69.	18.	1.	1.	0.	0.	0.
I = 113	0.	0.	0.	42.	1.	2.	3.	19.
I = 121	1.	0.	55.	16.	1.	0.	1.	4.
I = 129	79.	7[illegible].	0.	1.	13.	62.	6.	7.
I = 137	17.	0.	0.	0.	1.	1[illegible].	1.	31.
I = 145	1.	11[illegible].	93.	0.	1.	305.	93.	341.
I = 153	917.	0.	165.	0.	52[illegible].	60.	175.	246.
I = 161	0.	58.	28.	0.	1.	489.	1034.	459.
I = 169	526.	745.	485.	124.	164.	275.	139.	26.
I = 177	89.	10[illegible].	198.	140.	40[illegible].	334.	74.	491.
I = 185	390.	1097.	256.	70[illegible].	19[illegible].	1014.	373.	550.
I = 193	643.	10[illegible].	751.	136[illegible].	9[illegible].	440.	966.	652.
I = 201	1433.	60[illegible].	7[illegible]1.	1433.	64[illegible].	644.	401.	382.
I = 209	1056.	14[illegible].	495.	592.	[illegible].	577.	1064.	245.
I = 217	1463.	1170.	99.	242.	75.	65.	0.	1045.
I = 225	9734.	617.	929.	1064.	248[illegible].	926.	646.	725.
I = 233	700.	11[illegible].	8[illegible]1.	711.	3[illegible].	146.	45[illegible].	242.
I = 241	60.	160[illegible].	6471.	1842.	4767.	3397.	965.	1635.
I = 249	1213.	39[illegible].	507.	524.	164.	3887.	23806.	0.
I = 257	12369.	0.	5106.	0.	4628.	1678.	671.	784.
I = 265	655.	41[illegible].	2[illegible]96.	251.	171.	226.	351.	22.
I = 273	16.	33.	18.	0.	0.	1090.	7208.	2281.
I = 281	4970.	761.	533.	3411.	2030.	146.	332.	1364.
I = 289	239.	194.	528.	1899.	253.	67.	143.	101.
I = 297	297.	6[illegible].	[illegible].	54[illegible].	4[illegible]6.	1063.	797.	679.
I = 305	493.	20.	2064.	700.	2[illegible].	30.	129.	1.
I = 313	71.	50.	755.	1805.	600.	216.	561.	394.
I = 321	211.	703.	421.	6[illegible].	217.	625.	629.	340.
I = 329	607.	60[illegible].	0.	0.	2[illegible].	352.	6[illegible]6.	54[illegible].
I = 337	154.	765.	449.	144.	14.	22.	151.	297.
I = 345	84.	173.	202.	142.	63.	56.	190.	14.
I = 353	44.	90.	62.	121.	72.	0.	0.	0.
I = 361	0.	72.	15.	13.	11.	3.	2.	16.
I = 369	0.	0.	12.	0.	5.	0.	0.	0.

TOTALS - O = 198395.5 A = 198395.4

TABLE XVI SIMULATED MODAL SPLIT BY ZONE OF DEPARTURE

ZONE	VEHICLE (V)	TRANSIT (Q)	V+Q	PERCENT V	PERCENT Q
129	729.3	70.1	799.4	91.2	8.8
130	1952.1	377.7	2329.8	83.8	16.2
131	262.2	.0	262.2	100.0	.0
132	726.4	.0	726.4	100.0	.0
133	1547.1	257.6	1804.7	85.7	14.3
134	661.3	86.6	747.9	90.9	9.1
135	2251.5	114.6	2366.1	95.2	4.8
136	555.0	44.3	599.3	92.6	7.4
137	1149.0	39.8	1188.8	96.7	3.3
138	1167.9	.0	1167.9	100.0	.0
139	460.6	5.5	466.1	98.8	1.2
140	320.9	.0	320.9	100.0	.0
141	208.3	2.8	211.1	98.7	1.3
142	982.6	167.9	1150.5	85.4	14.6
143	1694.7	8.5	1903.2	99.6	.4
144	1262.1	104.6	1366.7	92.3	7.7
145	1254.2	14.2	1268.3	98.9	1.1
146	502.6	5.1	507.7	99.0	1.0
147	48.8	.0	48.8	100.0	.0
148	637.6	11.7	649.4	98.3	1.7
149	119.4	.0	119.4	100.0	.0
150	2156.5	1007.3	3163.8	68.2	31.8
151	1463.1	251.3	1714.4	85.3	14.7
152	1372.0	339.8	1711.7	80.2	19.8
153	1476.7	149.1	1625.8	90.8	9.2
154	.0	.0	.0	.0	.0
155	4786.6	374.4	5161.0	92.7	7.3
156	.0	.0	.0	.0	.0
157	3194.6	505.0	3699.6	86.4	13.6
158	3013.4	247.8	3261.2	92.4	7.6
159	4169.2	328.2	4494.4	92.8	7.2
160	2245.3	74.6	2320.0	96.8	3.2
161	.0	.0	.0	.0	.0
162	2080.2	183.9	2263.1	91.9	8.1
163	1111.4	.1	1111.5	100.0	.0
164	71.5	.0	71.5	100.0	.0
165	205.2	.0	205.2	100.0	.0
166	1000.6	537.5	1538.1	65.1	34.9
167	1379.6	604.1	1983.7	69.5	30.5
168	2592.6	1092.6	3685.2	70.4	29.6
169	1108.4	349.1	1457.5	76.1	23.9
170	1163.0	271.2	1434.1	81.1	18.9
171	1518.0	463.5	1981.5	76.6	23.4
172	1480.7	282.9	1763.6	84.0	16.0
173	4334.8	1079.3	5414.1	80.1	19.9
174	2163.3	653.4	2816.6	76.8	23.2
175	2174.5	300.5	2475.0	87.9	12.1
176	1767.5	266.4	2033.9	86.9	13.1
177	827.5	127.3	954.9	86.7	13.3
178	3695.4	551.1	4245.6	87.0	13.0
179	3597.7	422.4	4020.1	89.5	10.5
180	876.2	335.7	1211.9	72.3	27.7
181	1087.0	236.5	1323.5	82.2	17.8
182	1574.4	270.7	1845.1	85.3	14.7
183	.0	.0	.0	.0	.0
184	1930.5	1637.9	3567.4	54.1	45.9
185	2178.0	1824.0	4001.8	54.4	45.6
186	1472.9	2100.9	3573.8	41.2	58.8
187	2162.5	685.4	2847.9	75.9	24.1
188	1226.2	1498.5	2724.6	45.0	55.0
189	2574.0	965.2	3539.2	71.1	28.9

ZONE	VEHICLE (V)	TRANSIT (Q)	V+Q	PERCENT V	PERCENT Q
190	606.9	380.9	987.8	61.4	38.6
191	1622.7	795.3	2417.9	67.1	32.9
192	1633.5	720.2	2353.7	69.4	30.6
193	2182.4	706.3	2888.7	75.5	24.5
194	1351.6	191.9	1543.4	87.6	12.4
195	1177.1	452.6	1629.7	72.2	27.8
196	1943.6	2606.4	4550.0	42.7	57.3
197	1592.5	2236.6	3829.2	41.6	58.4
198	935.5	1240.9	2176.4	43.0	57.0
199	1512.5	2869.2	4381.7	34.5	65.5
200	1737.6	2468.8	4216.4	41.3	58.7
201	1259.2	1683.3	2942.5	42.8	57.2
202	1240.7	1105.9	2346.6	52.9	47.1
203	763.1	796.1	1559.1	48.9	51.1
204	1660.6	2255.2	3915.8	42.4	57.6
205	1814.5	1216.8	3031.3	59.9	40.1
206	480.3	502.0	982.3	48.9	51.1
207	1702.7	1598.6	3301.3	51.6	48.4
208	2571.5	2315.5	4887.0	52.6	47.4
209	2137.9	1101.0	3238.9	66.0	34.0
210	1535.8	1384.8	2918.6	52.6	47.4
211	1588.9	1611.8	3210.7	49.6	50.4
212	2123.5	502.2	2625.7	80.9	19.1
213	1871.4	810.2	2681.6	69.8	30.2
214	2037.7	1902.3	3940.0	51.7	48.3
215	1609.3	681.5	2290.8	70.2	29.8
216	3214.8	1025.9	4240.7	75.8	24.2
217	961.0	339.1	1300.1	73.9	26.1
218	2424.9	1106.8	3531.6	68.7	31.3
219	677.1	303.4	980.9	69.0	31.0
220	3041.4	1013.0	4054.3	75.0	25.0
221	109.0	.1	109.1	99.9	.1
222	2107.1	568.7	2675.8	78.7	21.3
223	1113.2	.0	1113.2	100.0	.0
224	61.9	27.6	89.5	69.2	30.8
225	585.1	808.4	1393.5	42.0	58.0
226	1224.8	2163.2	3388.1	36.2	63.8
227	776.0	1681.3	2457.3	31.6	68.4
228	1090.1	1813.7	2903.8	37.5	62.5
229	1193.2	1904.5	3097.7	38.5	61.5
230	1055.8	1994.2	3050.0	34.6	65.4
231	907.5	1658.7	2566.2	35.4	64.6
232	1840.1	1822.1	3662.2	50.2	49.8
233	690.0	803.7	1493.7	46.2	53.8
234	1956.1	2199.4	4155.5	47.1	52.9
235	2489.7	2793.1	5282.8	47.1	52.9
236	2714.7	1163.2	3877.9	70.0	30.0
237	2169.0	566.8	2735.8	79.3	20.7
238	2529.2	1023.1	3552.3	71.2	28.8
239	1222.1	617.9	1839.9	66.4	33.6
240	1698.2	428.5	2126.7	79.9	20.1
241	137.6	92.5	230.2	59.8	40.2
242	212.7	125.5	338.2	62.9	37.1
243	437.7	470.7	908.4	48.2	51.8
244	721.8	918.4	1640.3	44.0	56.0
245	528.8	807.9	1336.6	39.6	60.4
246	164.5	104.0	268.5	61.3	38.7
247	1393.6	1541.3	2934.9	47.5	52.5
248	1266.1	1589.4	2855.5	44.3	55.7
249	2534.7	1807.4	4342.2	58.4	41.6
250	2239.0	1204.5	3443.5	65.0	35.0

ZONE	VEHICLE (V)	TRANSIT (Q)	V+Q	PERCENT V	PERCENT Q
251	3707.8	[illegible]	6394.5	58.0	42.0
252	2102.4	2183.9	4286.3	49.0	51.0
253	1[illegible]6.5	[illegible]	[illegible]	70.[illegible]	[illegible]
254	5[illegible]8.6	[illegible]	[illegible]	[illegible]	[illegible]
255	[illegible]5.4	[illegible]	1139.2	61.0	39.0
256	.0	.0	.0	.0	.0
257	460.5	615.7	1076.1	42.8	57.2
258	.0	.0	.0	.0	.0
259	331.1	303.[illegible]	634.[illegible]	52.2	47.8
260	.0	.0	.0	.0	.0
261	752.2	1377.4	2129.6	36.[illegible]	[illegible]
262	[illegible]5.8	650.7	1506.4	43.1	56.9
263	1[illegible]2.4	1[illegible]	3[illegible]	[illegible]	[illegible]
264	1254.9	982.[illegible]	2237.7	56.1	43.9
65	643.9	737.1	1381.0	46.6	53.4
266	2681.9	1100.2	3782.1	70.[illegible]	[illegible]
267	3541.3	1832.9	5374.[illegible]	65.[illegible]	[illegible]
268	1206.6	514.[illegible]	1720.[illegible]	70.1	[illegible]
269	2114.2	[illegible]	[illegible]	77.4	[illegible]
270	2775.8	718.8	3494.[illegible]	79.4	20.6
271	2748.7	881.4	3630.0	75.7	[illegible]
272	364.4	46.[illegible]	411.[illegible]	88.6	11.4
273	1584.7	77.[illegible]	1662.[illegible]	[illegible]	[illegible]
274	1059.5	[illegible]	1159.0	[illegible]	[illegible]
275	1553.5	192.1	1746.[illegible]	[illegible]	11.1
276	[illegible]15.2	102.4	[illegible]17.[illegible]	[illegible]	11.2
277	204.3	41.4	245.7	83.2	[illegible]
278	128.1	[illegible]	189.[illegible]	[illegible]	[illegible]
279	162.5	203.1	365.[illegible]	44.5	[illegible]
280	134.5	309.7	444.2	30.3	[illegible]
281	476.6	744.5	1221.1	39.0	[illegible]
282	[illegible]95.9	[illegible]	[illegible]	39.[illegible]	[illegible]
283	525.6	747.4	1273.[illegible]	41.2	[illegible]
284	1287.1	1355.1	2642.2	[illegible]	[illegible]
285	1250.5	1171.[illegible]	2422.3	[illegible]	[illegible]
286	[illegible]92.2	[illegible]	[illegible]	[illegible]	[illegible]
287	1703.7	1221.7	2925.4	[illegible]	[illegible]
288	561.8	482.2	1044.1	[illegible]	[illegible]
289	1388.1	845.8	2233.9	[illegible]	[illegible]
290	1354.3	1594.9	2949.[illegible]	[illegible]	[illegible]
291	[illegible]84.9	1654.[illegible]	3141.7	[illegible]	[illegible]
292	2049.2	2377.2	4426.4	[illegible]	[illegible]
293	1008.0	322.5	1330.5	75.8	[illegible]
294	871.1	323.9	1195.[illegible]	72.9	[illegible]
295	2587.3	400.4	2987.7	[illegible]	[illegible]
296	965.6	352.5	1318.1	73.3	[illegible]
297	[illegible]40.0	1046.1	4886.1	[illegible]	[illegible]
298	1792.8	[illegible]	[illegible]	[illegible]	[illegible]
299	1036.0	100.1	1136.1	[illegible]	[illegible]
300	[illegible]25.3	[illegible]	[illegible]	[illegible]	[illegible]
301	727.6	[illegible]	1132.[illegible]	[illegible]	[illegible]
302	[illegible]03.9	[illegible]	[illegible]	[illegible]	[illegible]
303	1[illegible]2.3	[illegible]	[illegible]	[illegible]	[illegible]
304	2270.7	[illegible]	[illegible]	[illegible]	[illegible]
305	[illegible]83.1	2788.[illegible]	5471.[illegible]	[illegible]	[illegible]
306	[illegible]70.6	331.4	[illegible]60.6	[illegible]	[illegible]
307	[illegible]05.8	[illegible]	1[illegible]6.3	[illegible]	[illegible]
308	[illegible]53.2	[illegible]	[illegible]	[illegible]	[illegible]
309	[illegible]44.1	22.[illegible]	[illegible]	[illegible]	[illegible]
310	2542.1	[illegible]	[illegible]	[illegible]	[illegible]
311	[illegible]97.9	[illegible]	[illegible]	[illegible]	[illegible]

ZONE	VEHICLE (V)	TRANSIT (Q)	V+Q	PERCENT V	PERCENT Q
312	71.7	1.0	72.7	98.7	1.3
313	10.2	12.7	23.0	44.6	55.4
314	1266.4	1498.0	2764.4	45.8	54.2
315	807.8	1355.5	2163.3	37.3	62.7
316	1213.3	1784.2	2997.5	40.1	59.9
317	1691.2	1975.1	3666.3	46.1	53.9
318	2184.2	1982.6	4166.7	52.5	47.5
319	1536.2	1490.5	3026.7	51.7	48.3
320	1103.3	326.4	1429.7	77.2	22.8
321	739.3	565.5	1304.8	56.7	43.3
322	1871.4	584.7	2456.1	76.2	23.8
323	2021.0	560.5	2581.5	78.3	21.7
324	790.7	927.7	1718.7	46.0	54.0
325	2590.8	2999.2	5590.0	46.3	53.7
326	2674.5	3816.8	6791.3	43.8	56.2
327	2339.2	2760.0	5099.2	48.7	51.3
328	987.1	1939.9	2927.1	28.4	71.6
329	2471.5	650.9	3122.4	79.2	20.8
330	4747.2	1288.9	6036.2	78.6	21.4
331	645.0	.0	645.0	100.0	.0
332	618.9	.0	618.9	100.0	.0
333	2654.0	852.2	3506.3	75.7	24.3
334	1512.6	510.4	2022.9	74.8	25.2
335	2040.6	756.6	2797.2	73.0	27.0
336	280.9	206.7	487.6	57.6	42.4
337	1850.8	756.1	2606.9	71.0	29.0
338	1901.8	314.2	2216.0	85.8	14.2
339	1976.5	524.1	2500.6	79.0	21.0
340	2970.3	785.6	3755.9	76.6	23.4
341	2288.9	65.3	2354.2	97.2	2.8
342	1061.3	37.5	1098.8	96.6	3.4
343	2100.9	827.4	2928.3	72.2	27.8
344	2694.9	1590.4	4285.3	62.9	37.1
345	2735.2	399.0	3134.2	87.3	12.7
346	1974.6	276.4	2251.1	87.7	12.3
347	2560.4	446.9	3007.3	85.1	14.9
348	971.4	539.2	1466.6	63.5	36.5
349	1795.1	307.6	2012.7	84.7	15.3
350	2699.2	244.4	2943.6	91.7	8.3
351	3419.3	237.1	3256.4	92.7	7.3
352	1563.3	131.0	1694.3	92.3	7.7
353	2580.5	365.2	2945.7	87.6	12.4
354	2154.7	257.4	2412.1	89.3	10.7
355	1644.6	453.4	2097.9	78.4	21.6
356	2755.7	453.1	3158.8	85.7	14.3
357	2314.0	193.7	2507.7	92.3	7.7
358	708.2	.0	708.2	100.0	.0
359	688.1	.0	688.1	100.0	.0
360	740.5	.0	740.5	100.0	.0
361	264.0	.0	264.0	100.0	.0
362	2770.5	565.0	3335.5	82.9	17.9
363	812.8	40.2	853.0	92.7	7.3
364	815.8	61.2	877.0	94.2	5.8
365	847.8	66.6	914.4	92.7	7.3
366	756.4	36.1	792.5	95.7	4.7
367	1227.1	111.5	1338.7	91.7	8.3
368	474.5	47.1	474.6	91.8	8.1
369	343.0	7.8	350.8	97.9	2.1
370	41.8	.0	41.8	100.0	.0
371	109.4	.0	109.4	100.0	.0
372	1196.8	11.1	1107.9	98.8	1.0
373	423.1	19.2	442.3	95.6	4.4

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FIG. 1 1964 PARKING CHARGES IN DOWNTOWN TORONTO

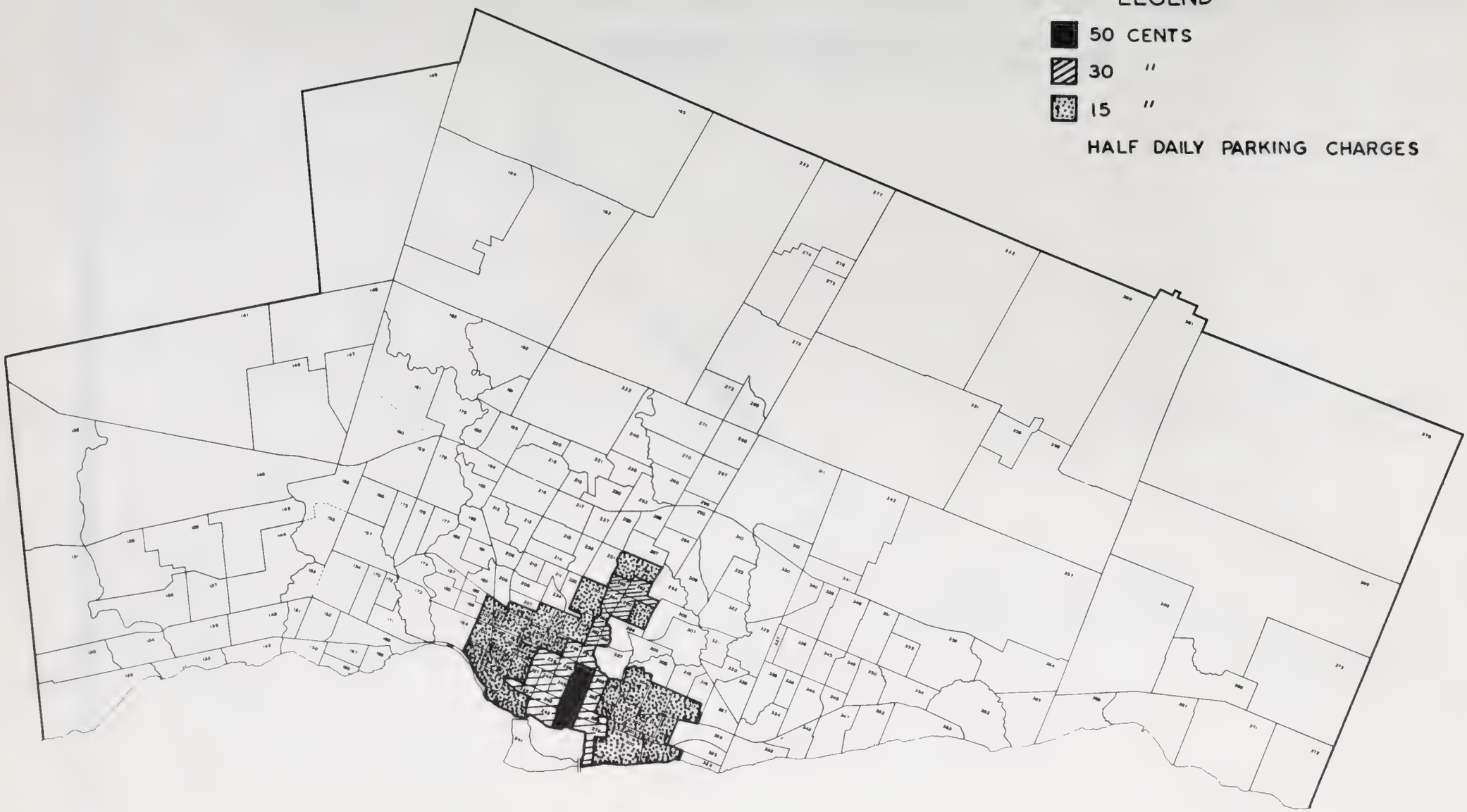
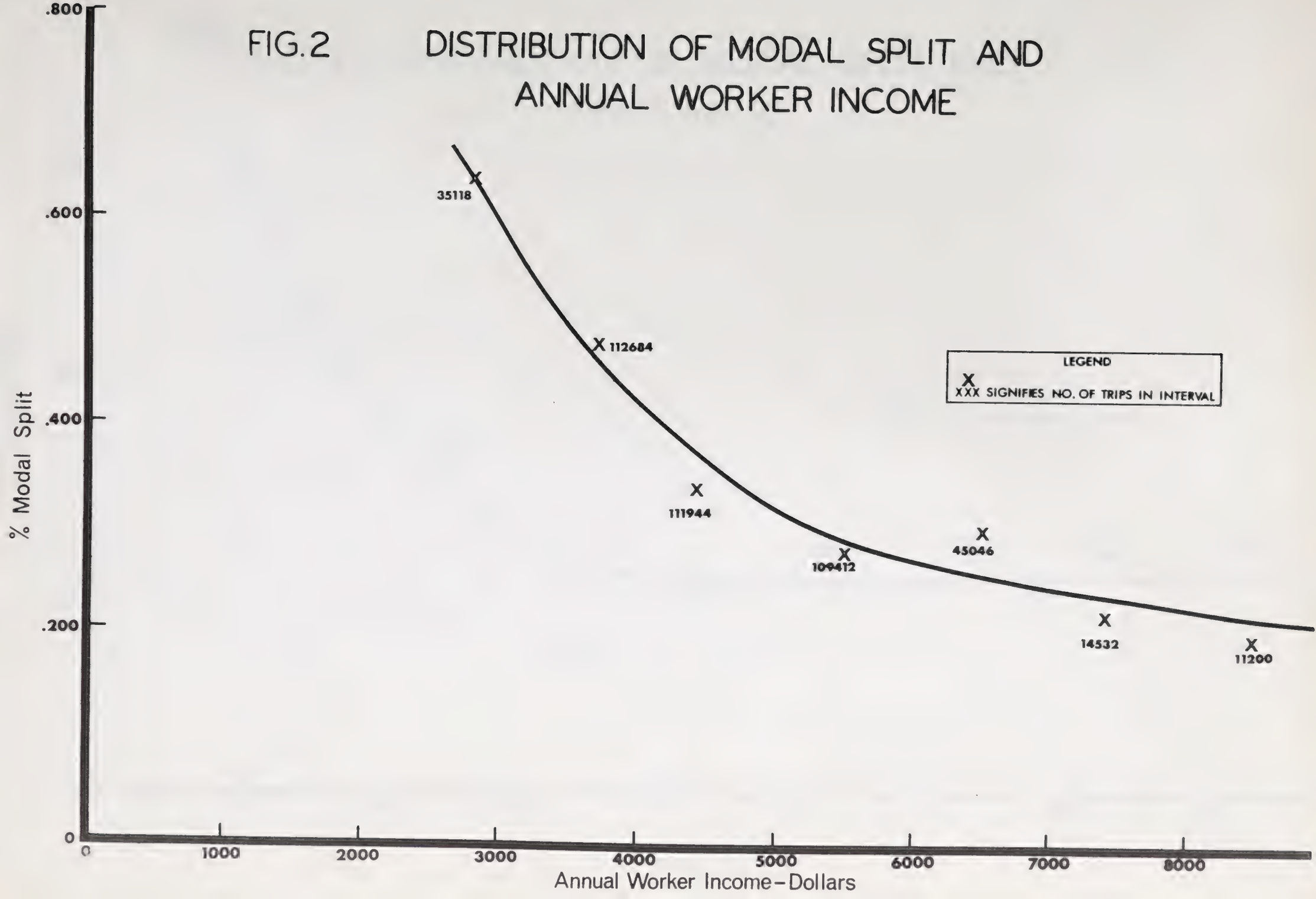


FIG. 2 DISTRIBUTION OF MODAL SPLIT AND ANNUAL WORKER INCOME



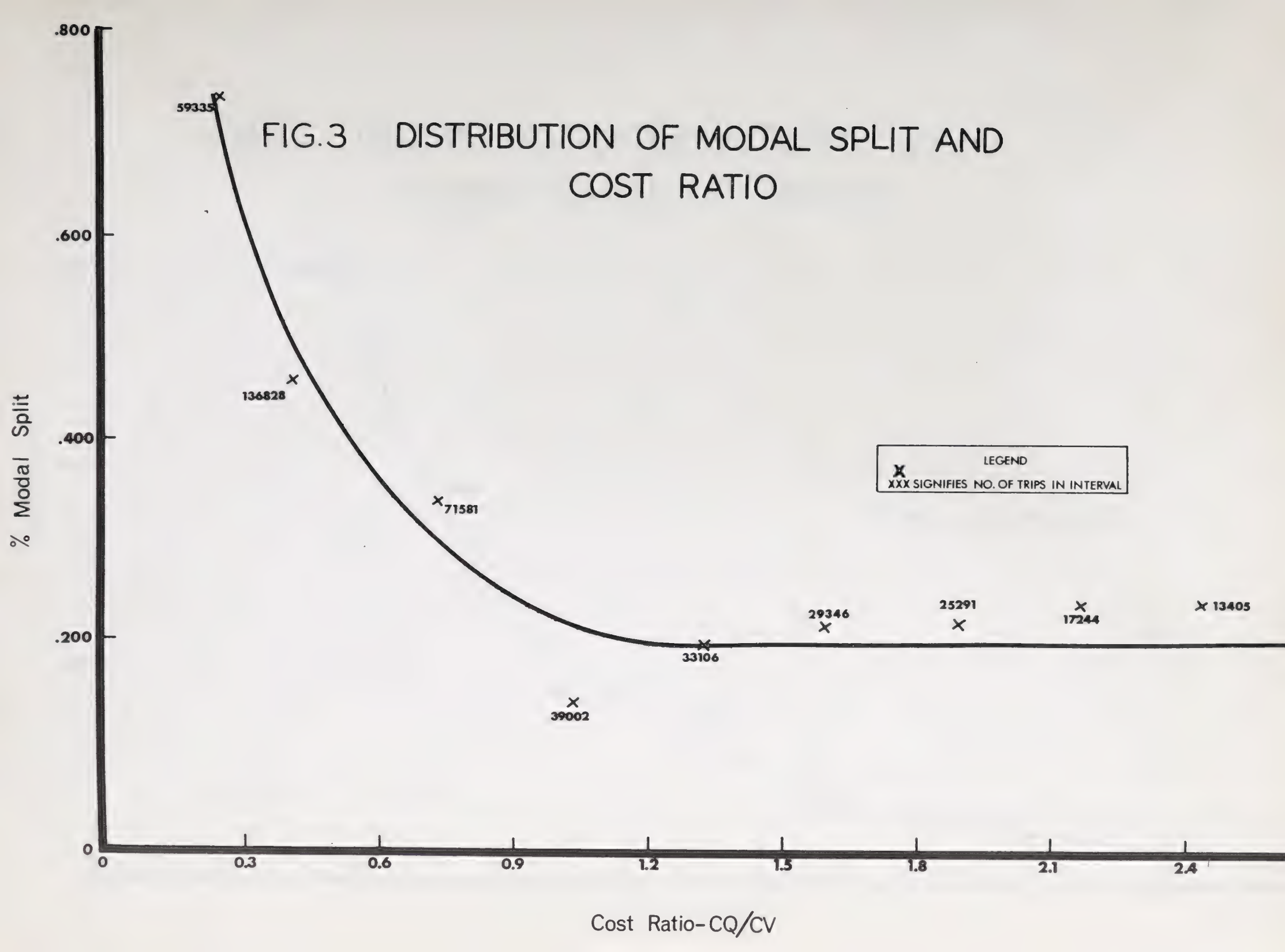


FIG.3 DISTRIBUTION OF MODAL SPLIT AND COST RATIO
% Modal Split
.800
.600
.400
.200
0
59335
136828
71581
39002
33106
29346
25291
17244
13405
LEGEND
XXX SIGNIFIES NO. OF TRIPS IN INTERVAL
0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
Cost Ratio- CQ/CV

FIG. 4 DISTRIBUTION OF MODAL SPLIT AND TRANSIT LEVEL-OF-SERVICE

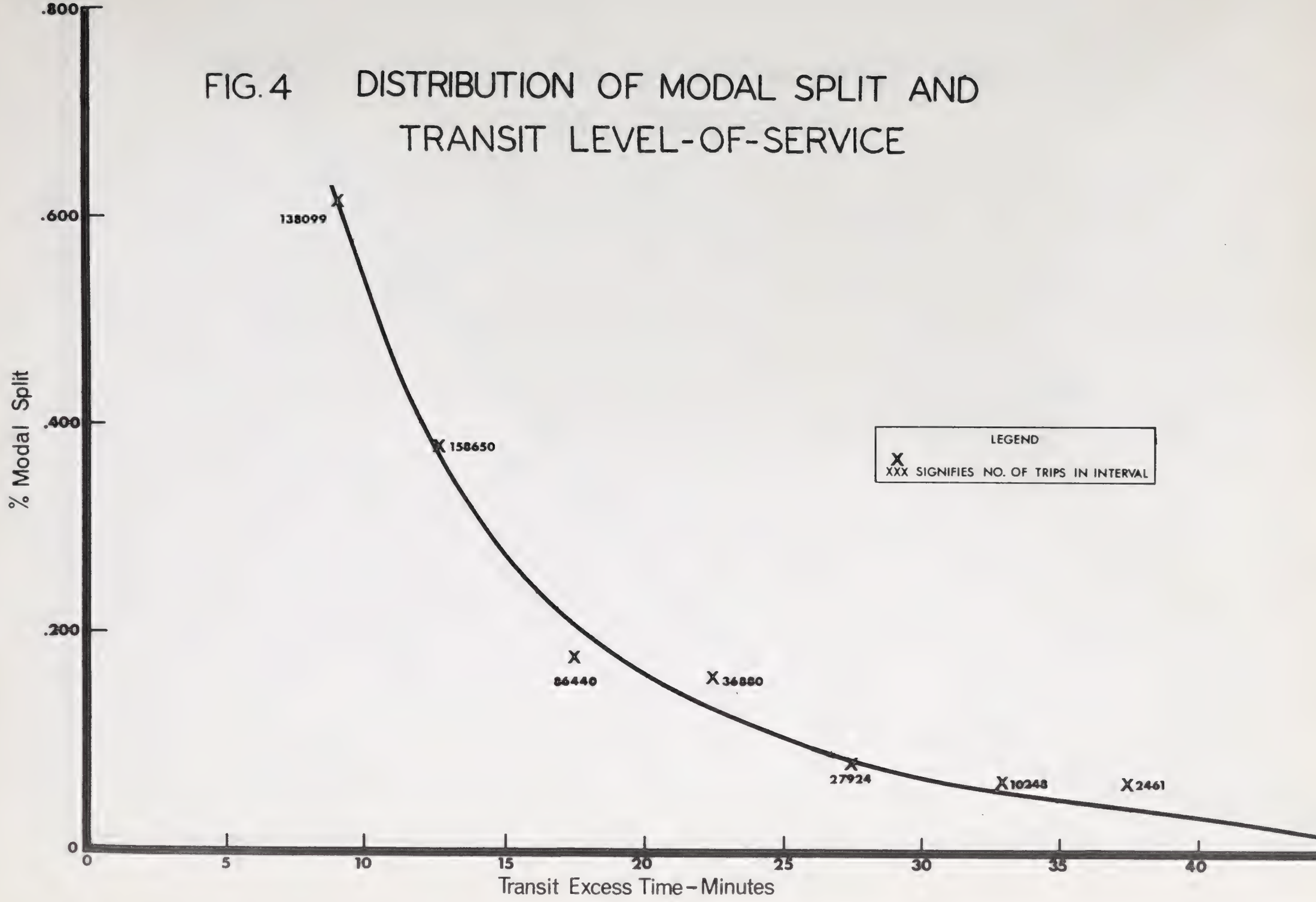


FIG. 5 DISTRIBUTION OF MODAL SPLIT AND TRAVEL TIME RATIO

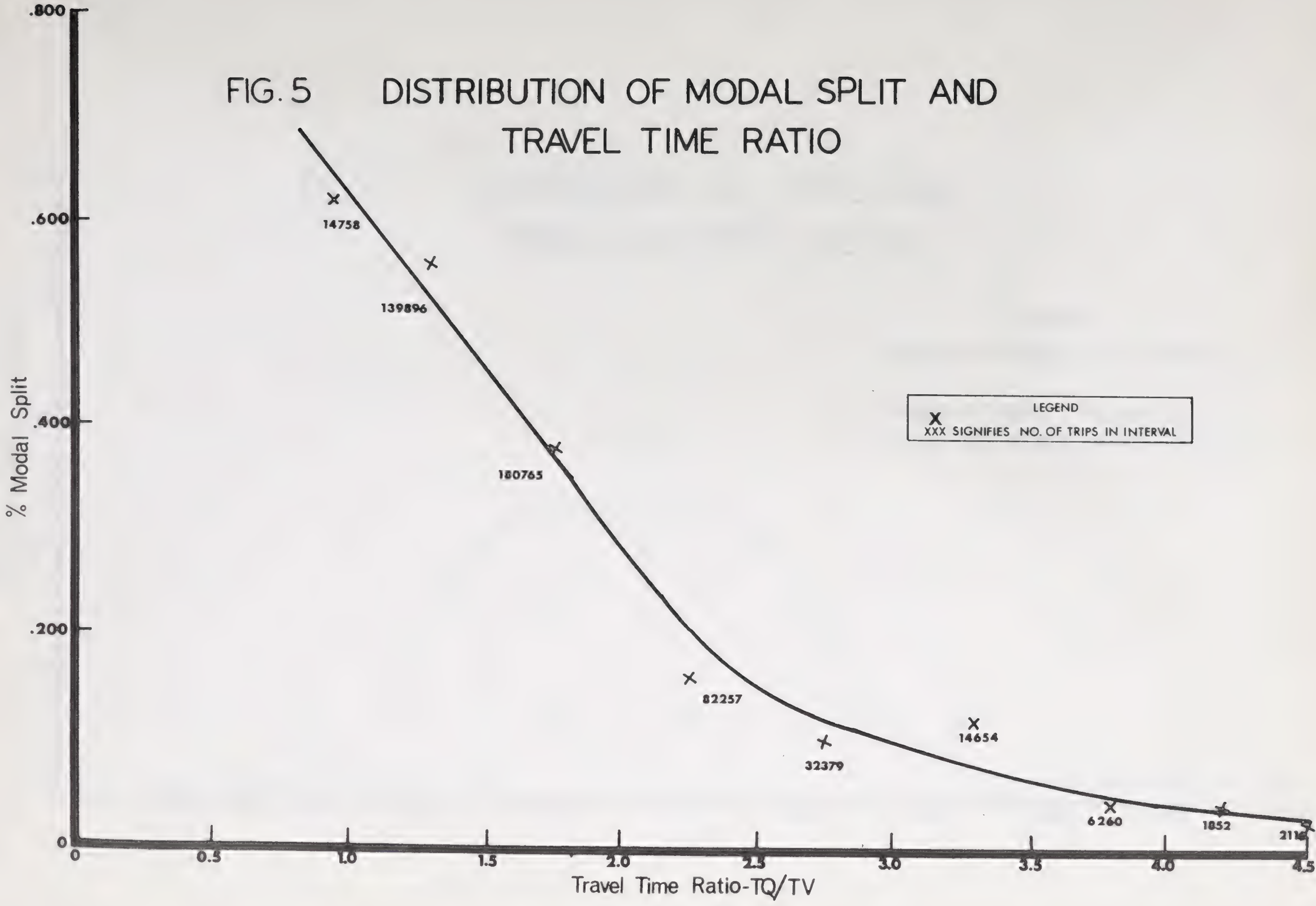


FIG. 6 DISTRIBUTION OF TRIPS AND ANNUAL WORKER INCOME

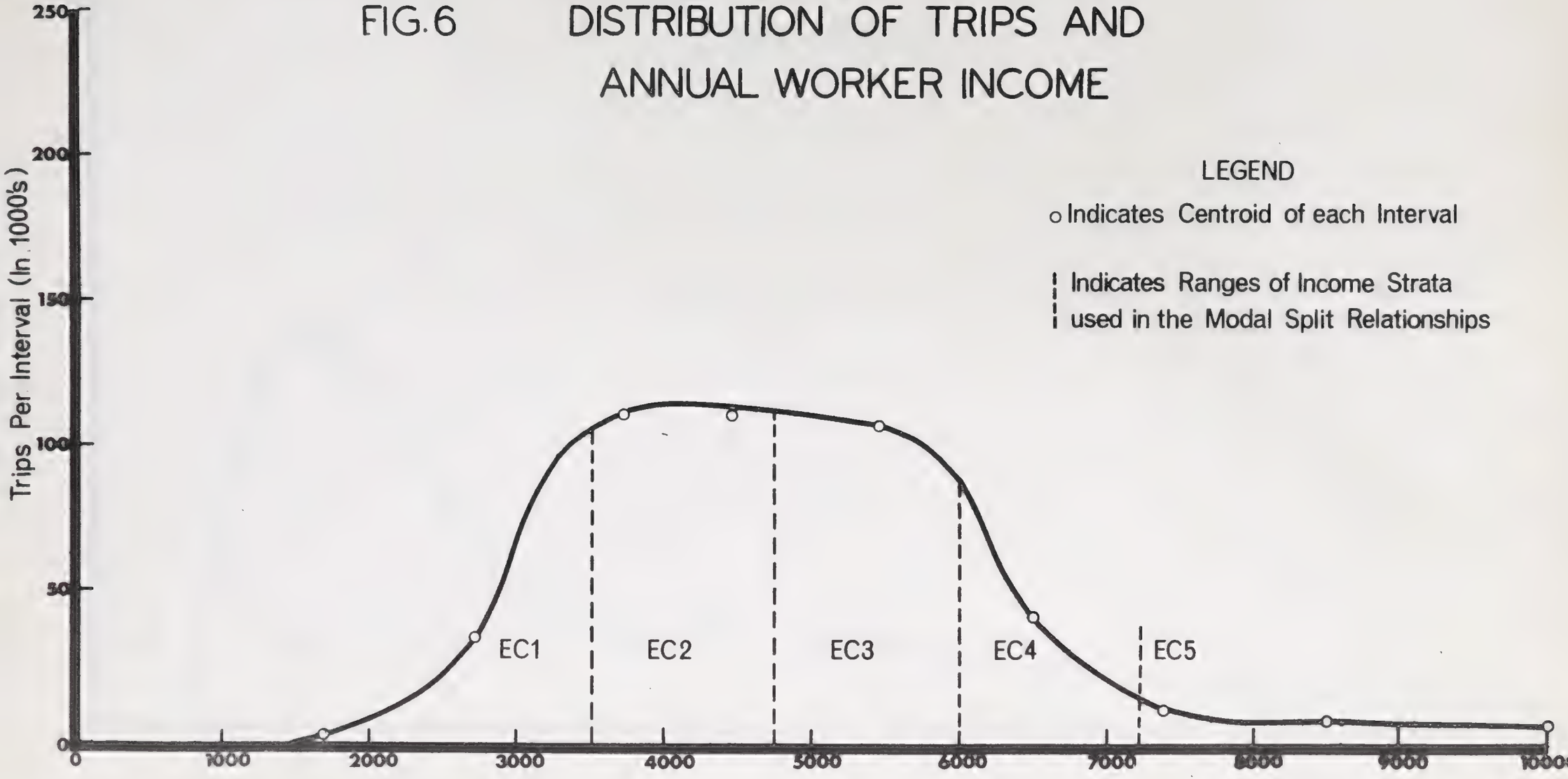


FIG.7 DISTRIBUTION OF TRIPS AND COST RATIO

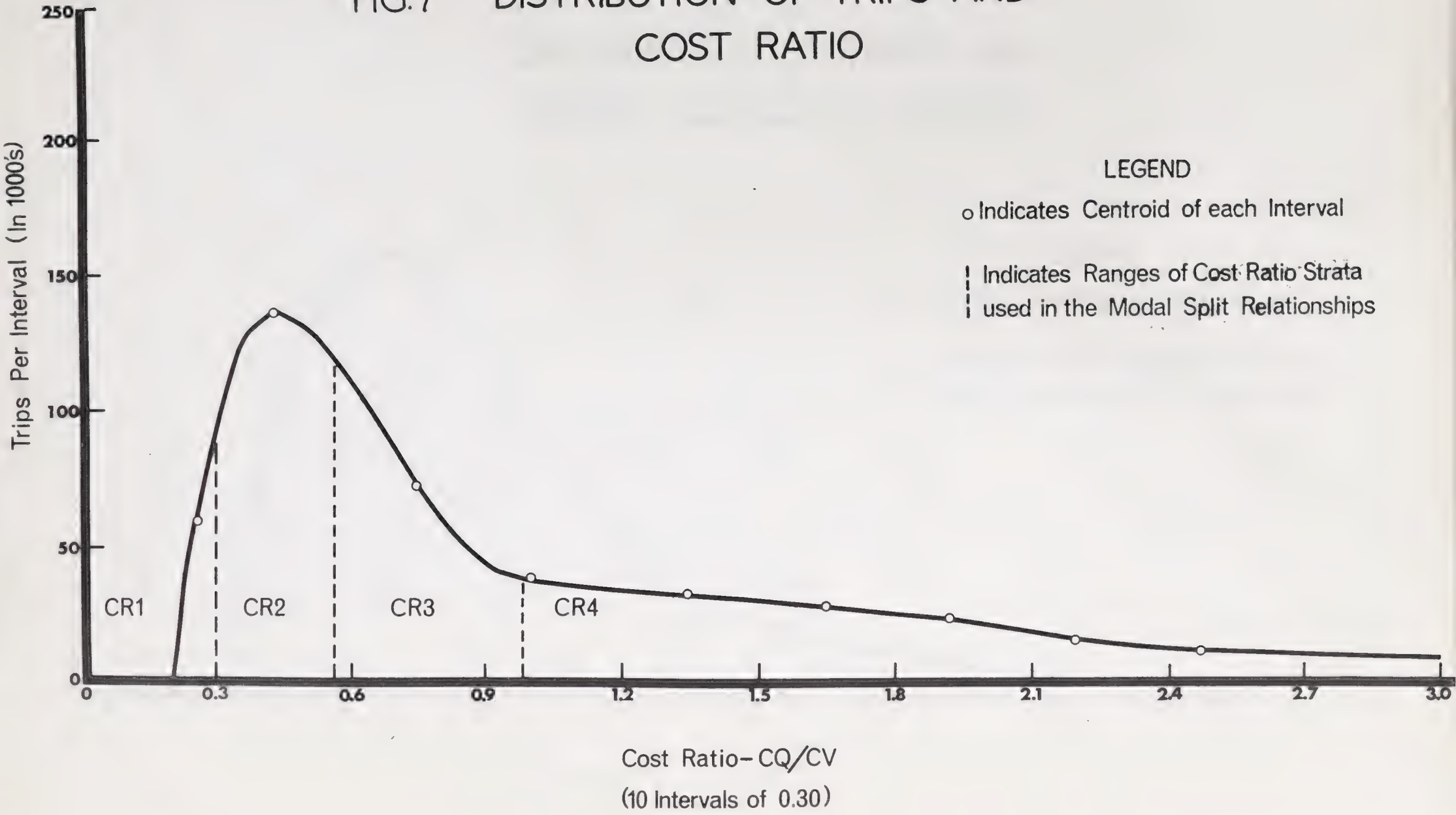


FIG.8 DISTRIBUTION OF TRIPS AND TRANSIT LEVEL-OF-SERVICE

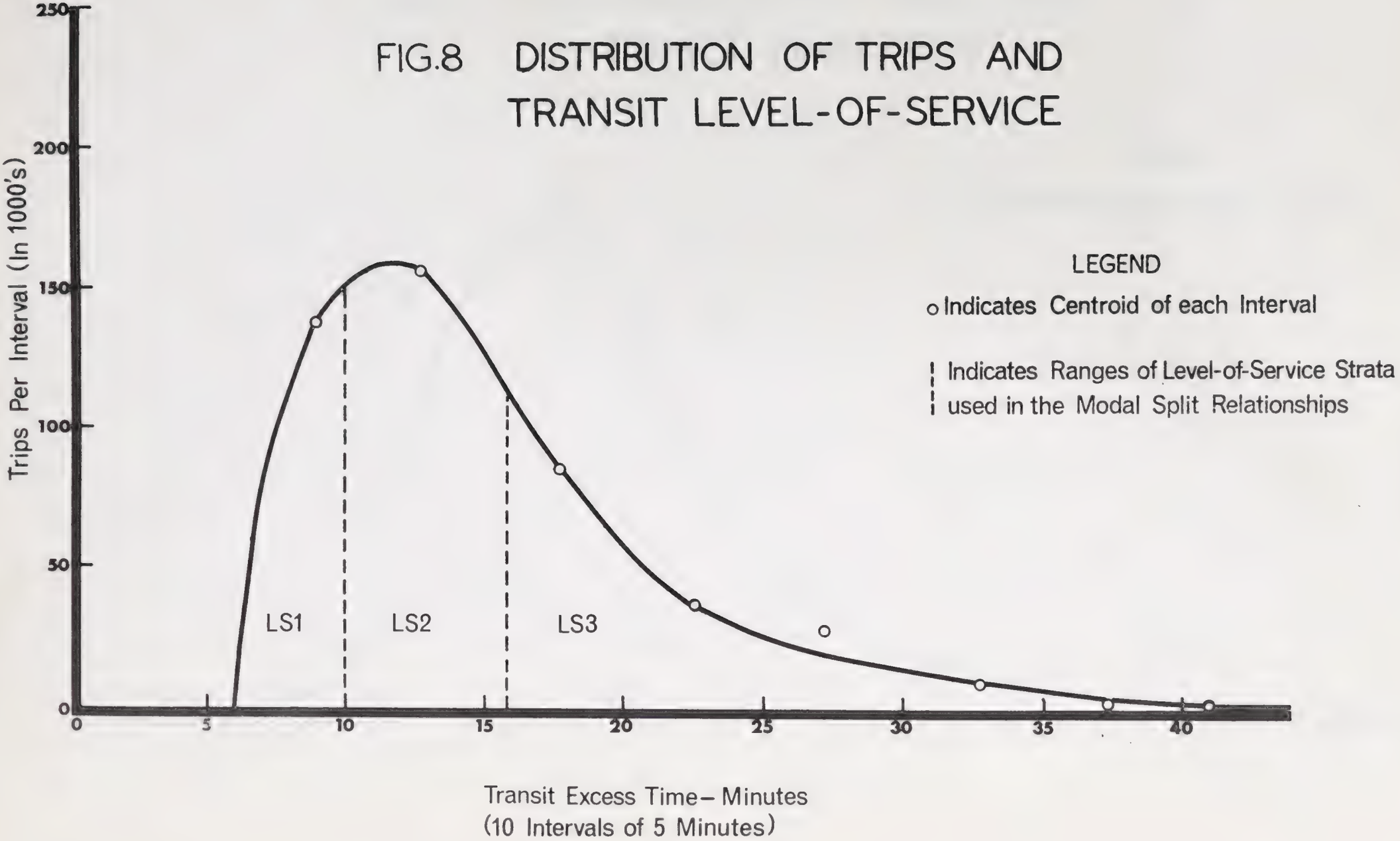


FIG.9 DISTRIBUTION OF TRIPS AND TRAVEL TIME RATIO

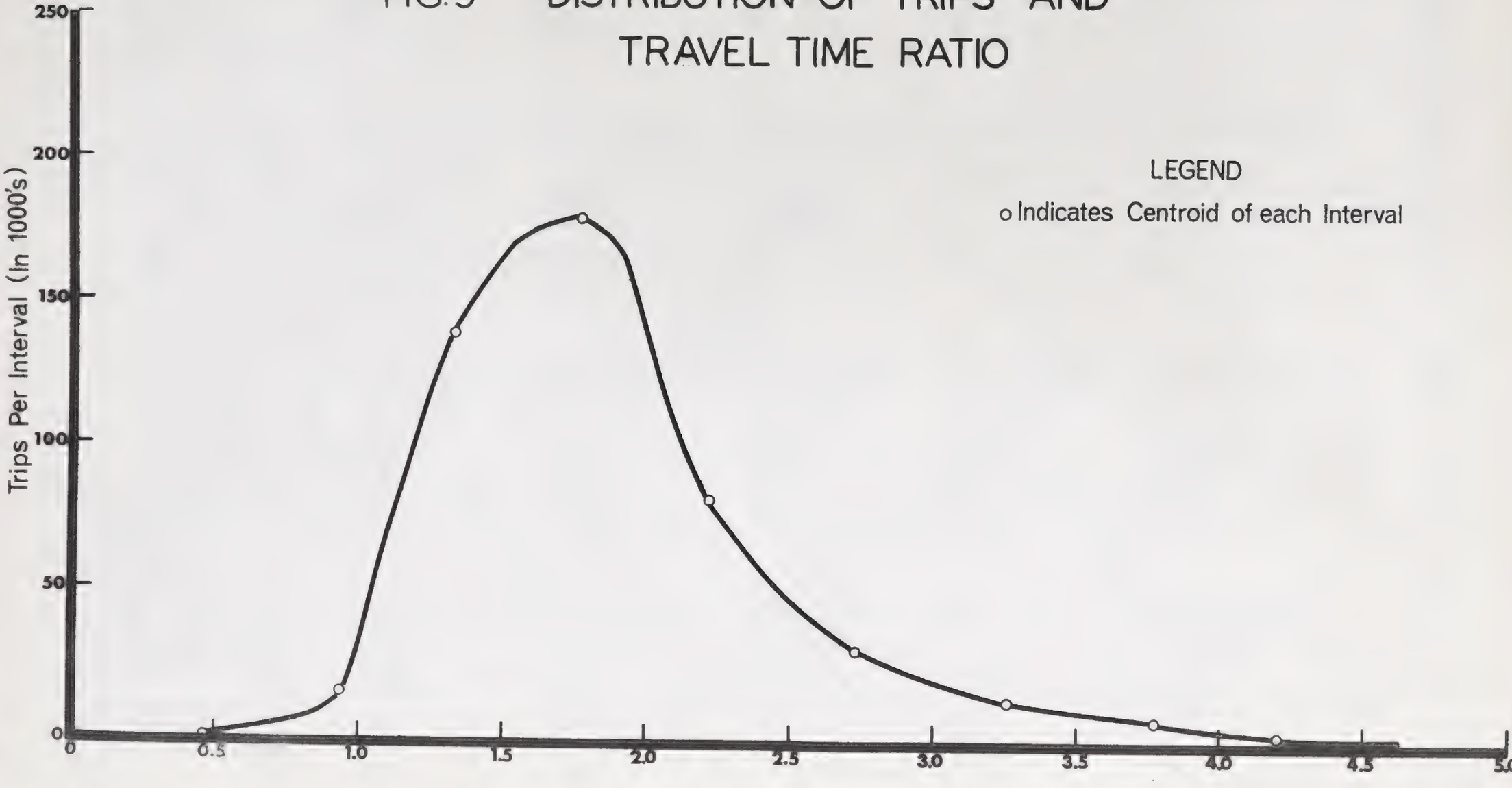
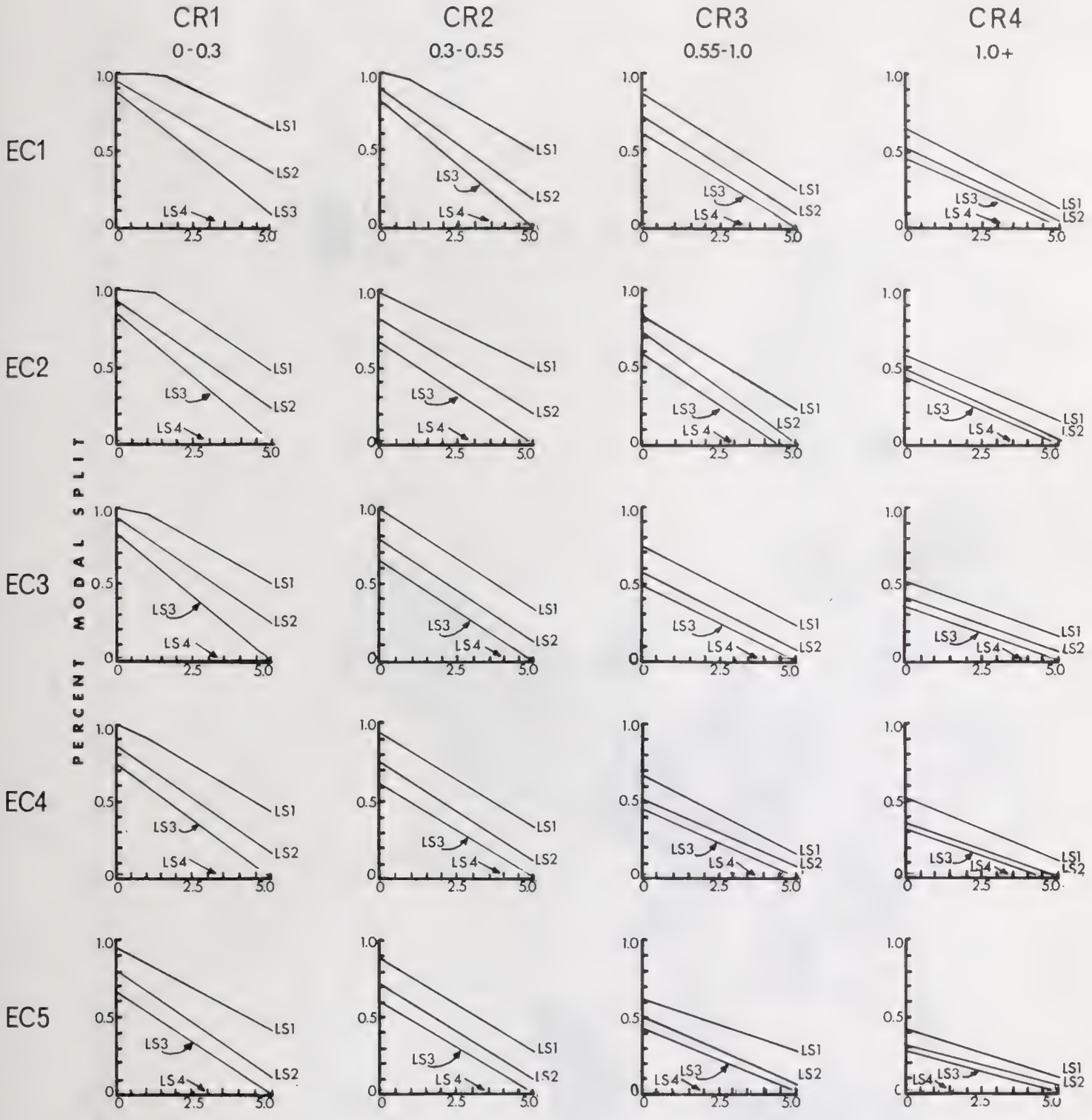


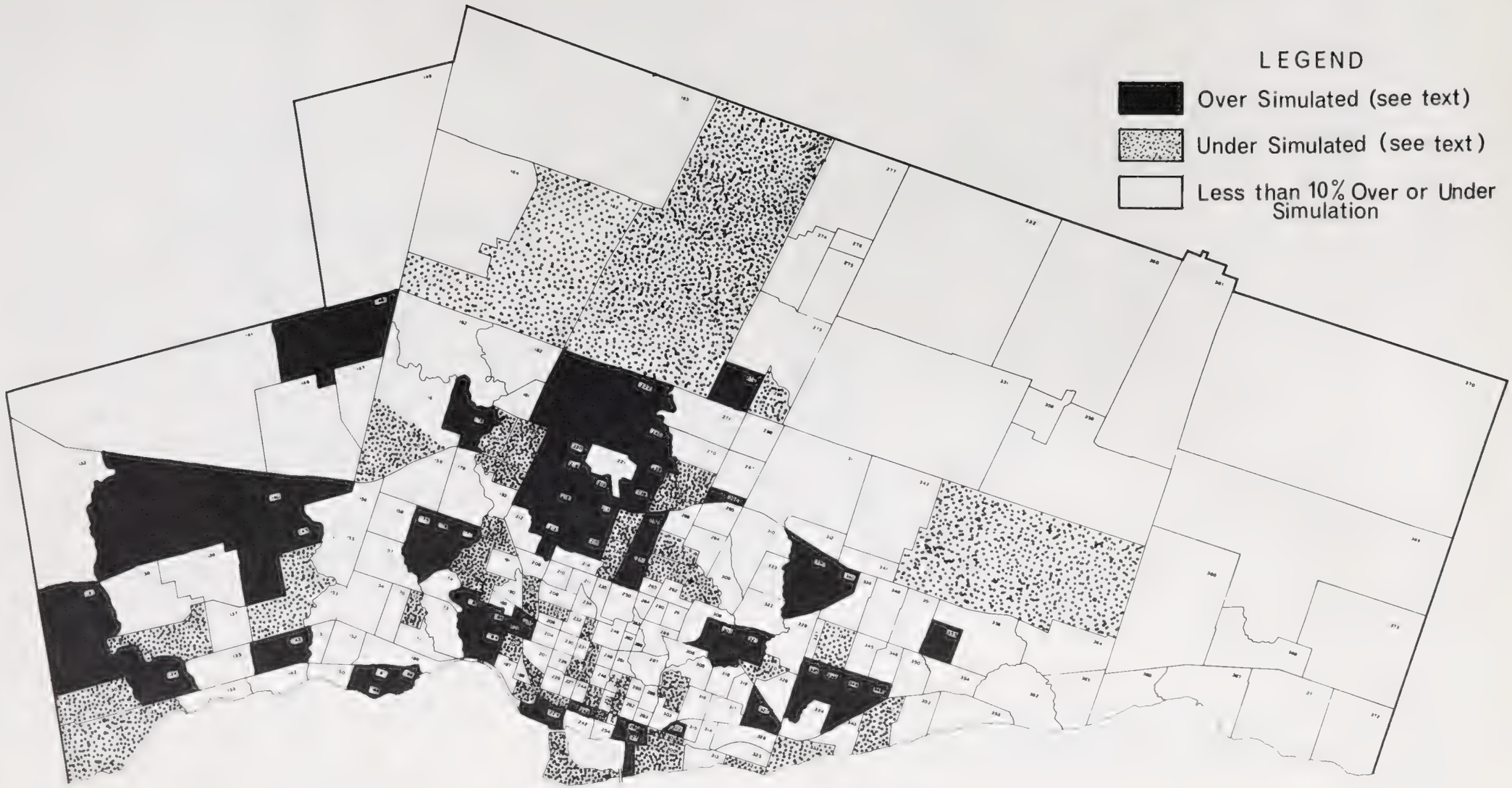
FIG. 10 MTPB MODAL SPLIT RELATIONSHIPS



Income Groups				Cost Ratio Groups				Level-of-Service Groups	
EC1	$ 0	-	$3,499	CR1	0	- 0.30	(0.28)*	LS1	0-10 min. (8.8)*
EC2	$3,500	-	$4,749	CR2	0.30	- 0.55	(0.40)	LS2	10-16 min. (13.1)
EC3	$4,750	-	$5,999	CR3	0.55	- 1.00	(0.70)	LS3	16-50 min. (18.0)
EC4	$6,000	-	$7,249	CR4	1.00	+	(2.50)	LS4	50 + min. (50.0)
EC5	>		$7,250					LS4 is the level-of-service at which no transit ridership occurs (0 per cent Modal Split)	

* mean of group

FIG. 11 ZONE MAP SHOWING AREAS OF OVER AND UNDER SIMULATION OF MODAL SPLIT



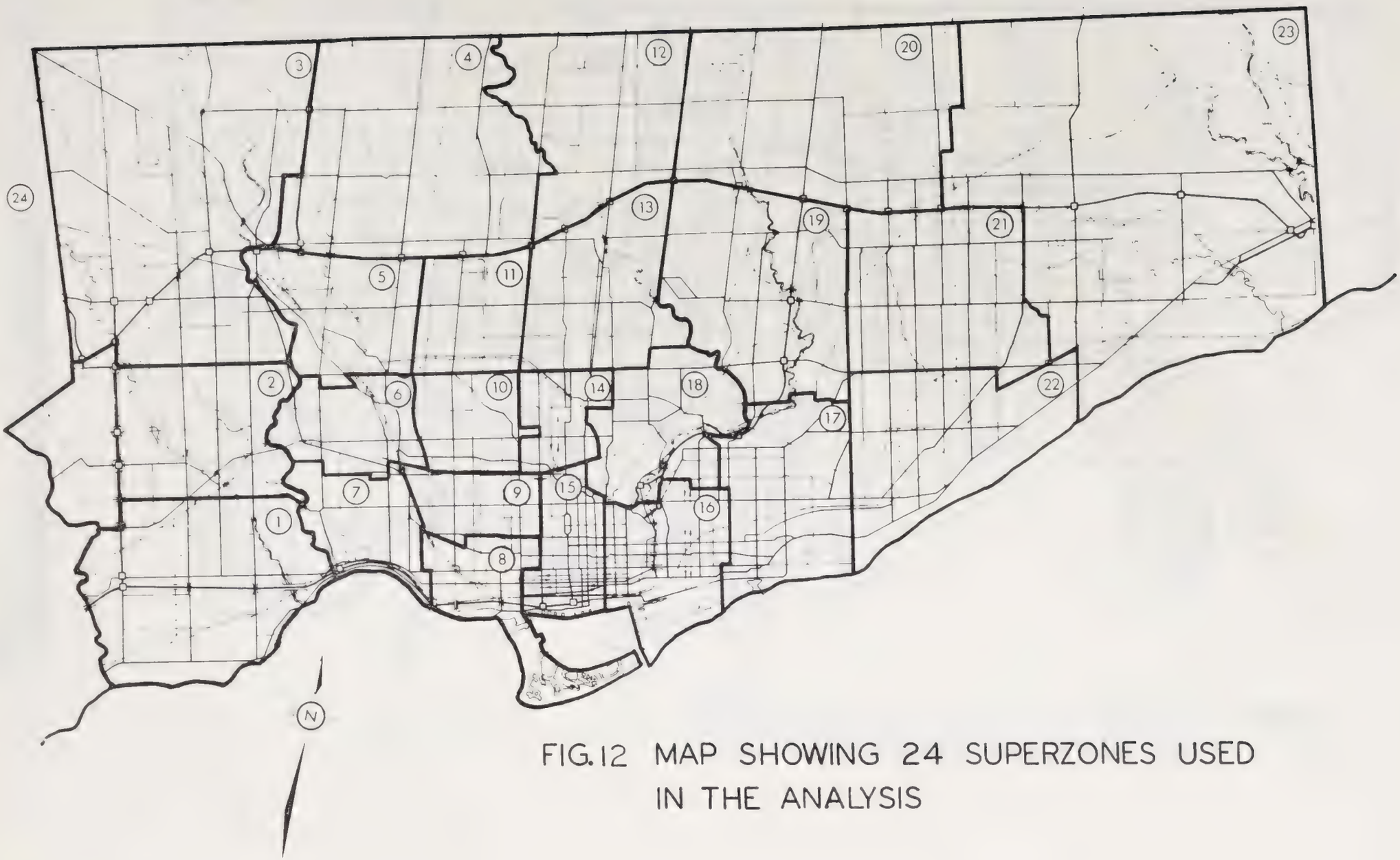


FIG. 12 MAP SHOWING 24 SUPERZONES USED IN THE ANALYSIS

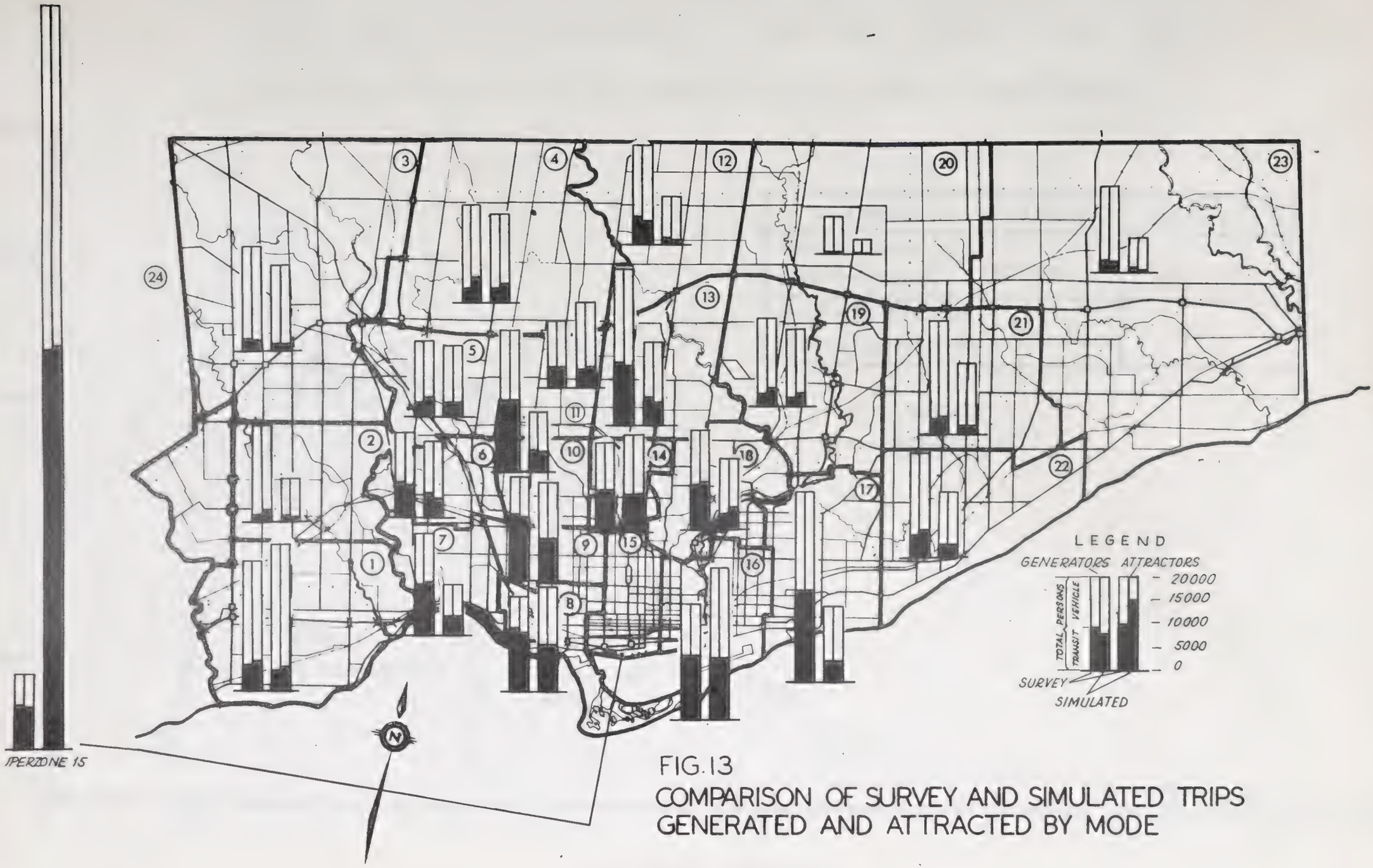
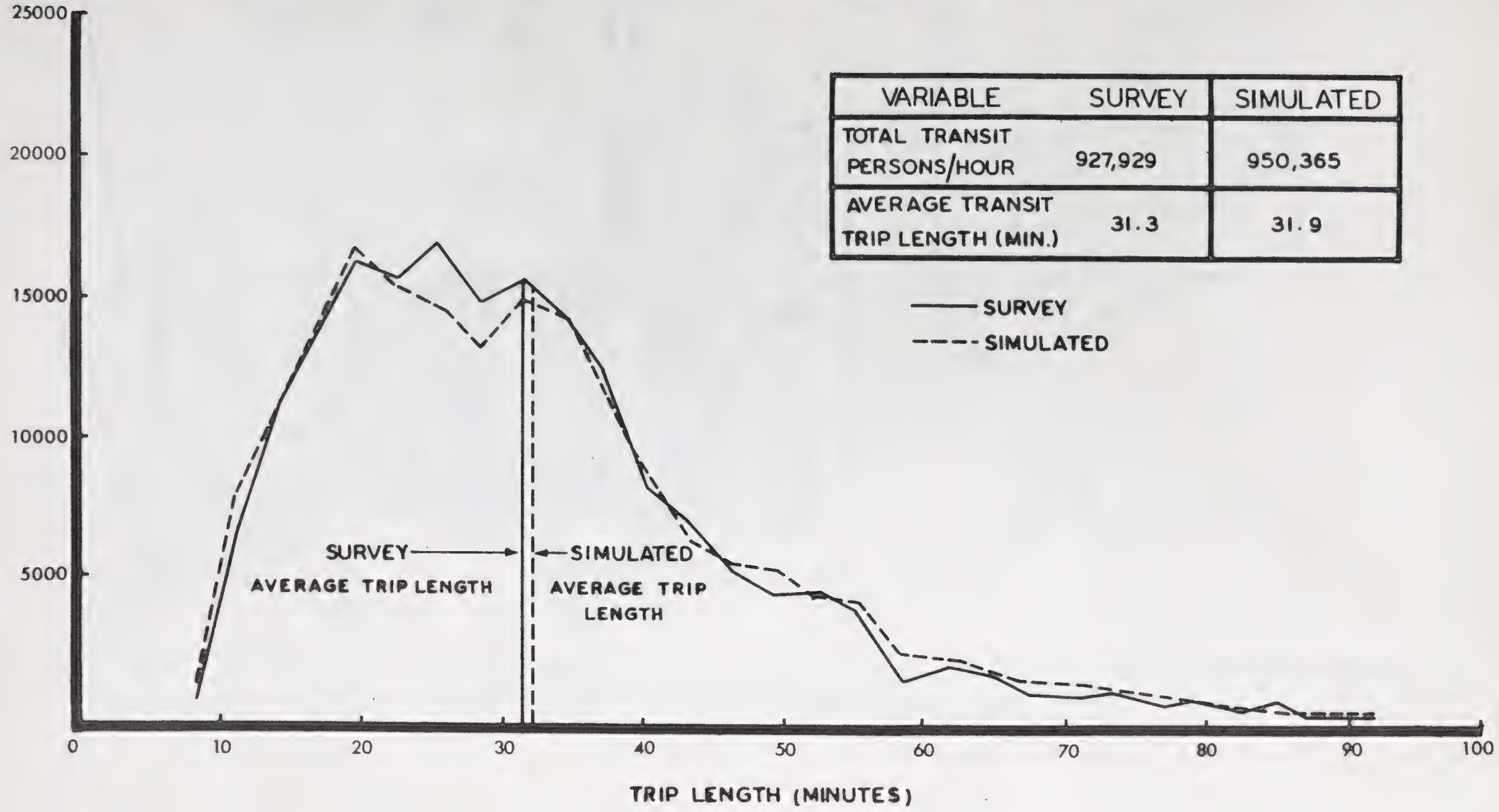


FIG. 13
COMPARISON OF SURVEY AND SIMULATED TRIPS GENERATED AND ATTRACTED BY MODE

FIG.14 COMPARISON OF SIMULATED AND OBSERVED TRANSIT TRIP LENGTH FREQUENCY DISTRIBUTIONS FOR TRIPS ORIGINATING WITHIN METROPOLITAN TORONTO.



VARIABLE	SURVEY	SIMULATED
TOTAL TRANSIT PERSONS/HOUR	927,929	950,365
AVERAGE TRANSIT TRIP LENGTH (MIN.)	31.3	31.9

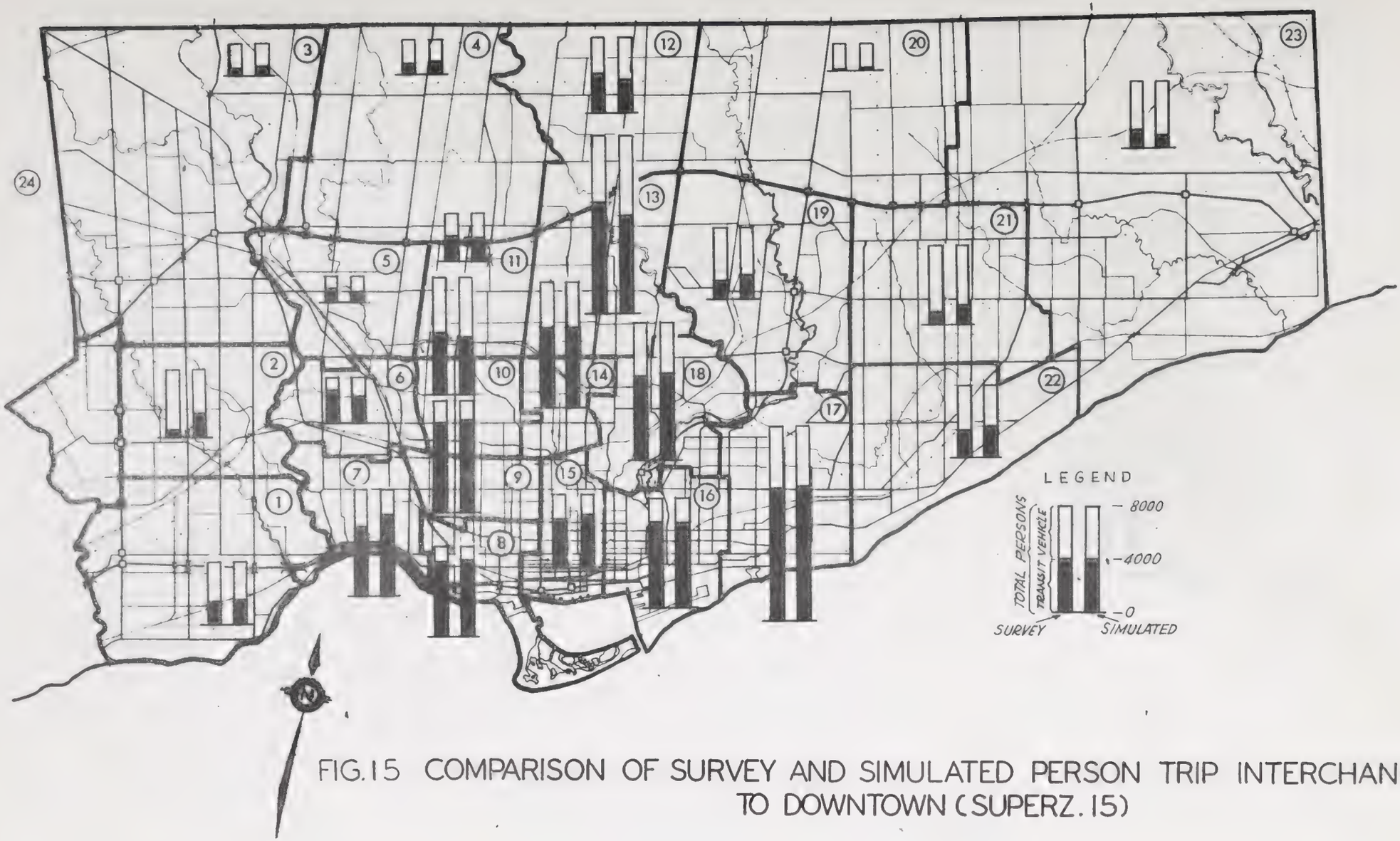


FIG. 15 COMPARISON OF SURVEY AND SIMULATED PERSON TRIP INTERCHANGES TO DOWNTOWN (SUPERZ. 15)

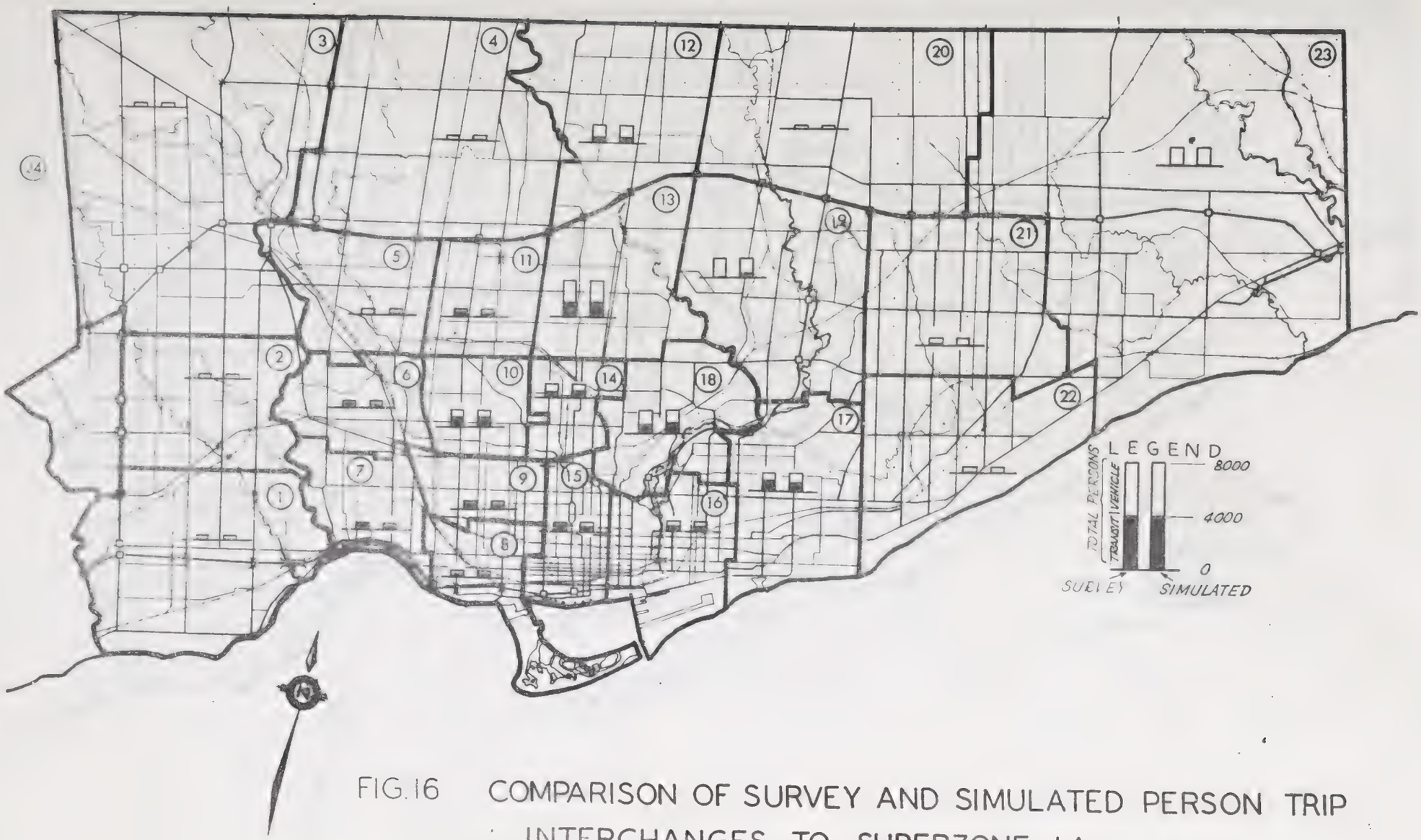


FIG. 16 COMPARISON OF SURVEY AND SIMULATED PERSON TRIP INTERCHANGES TO SUPERZONE 14.

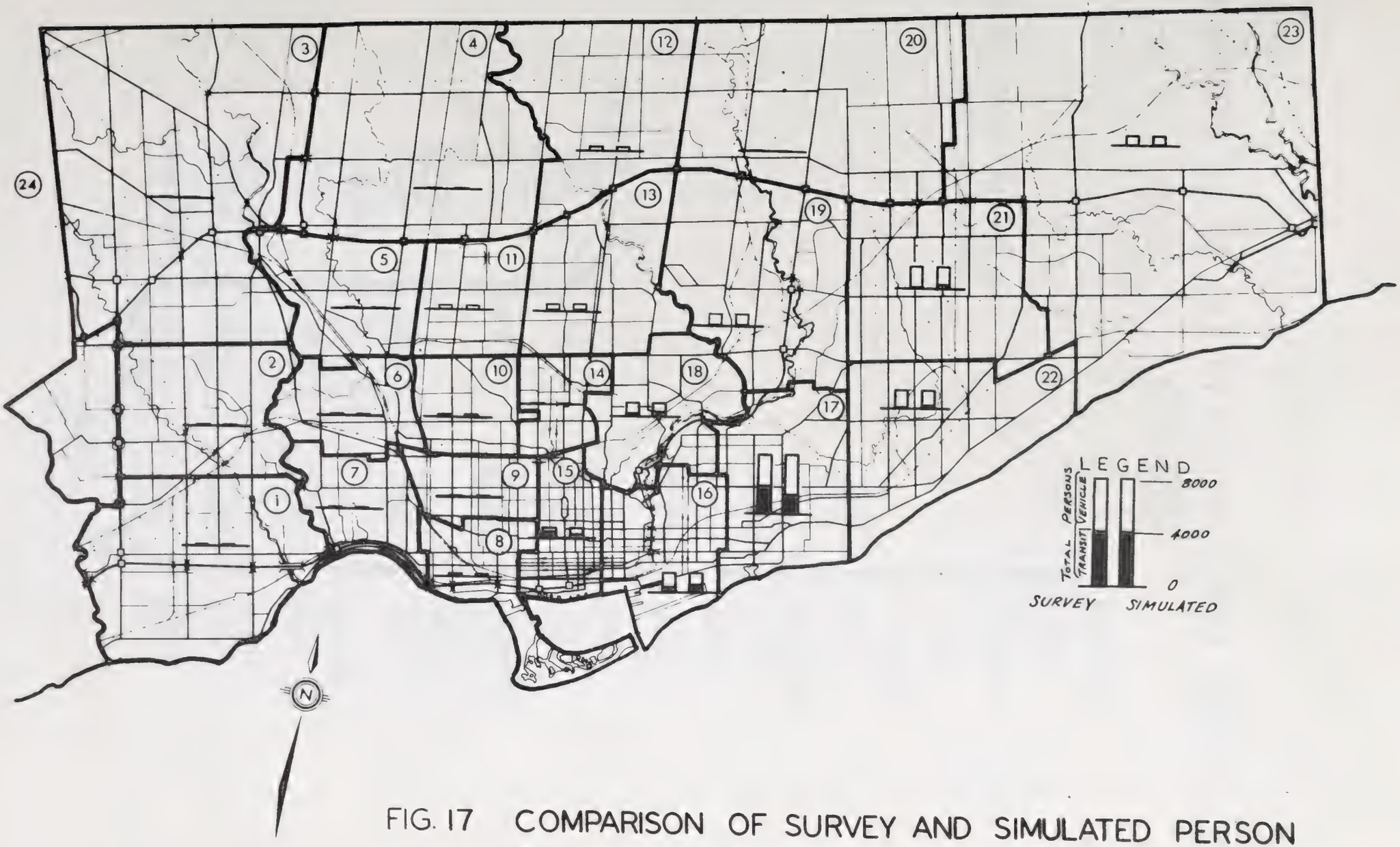
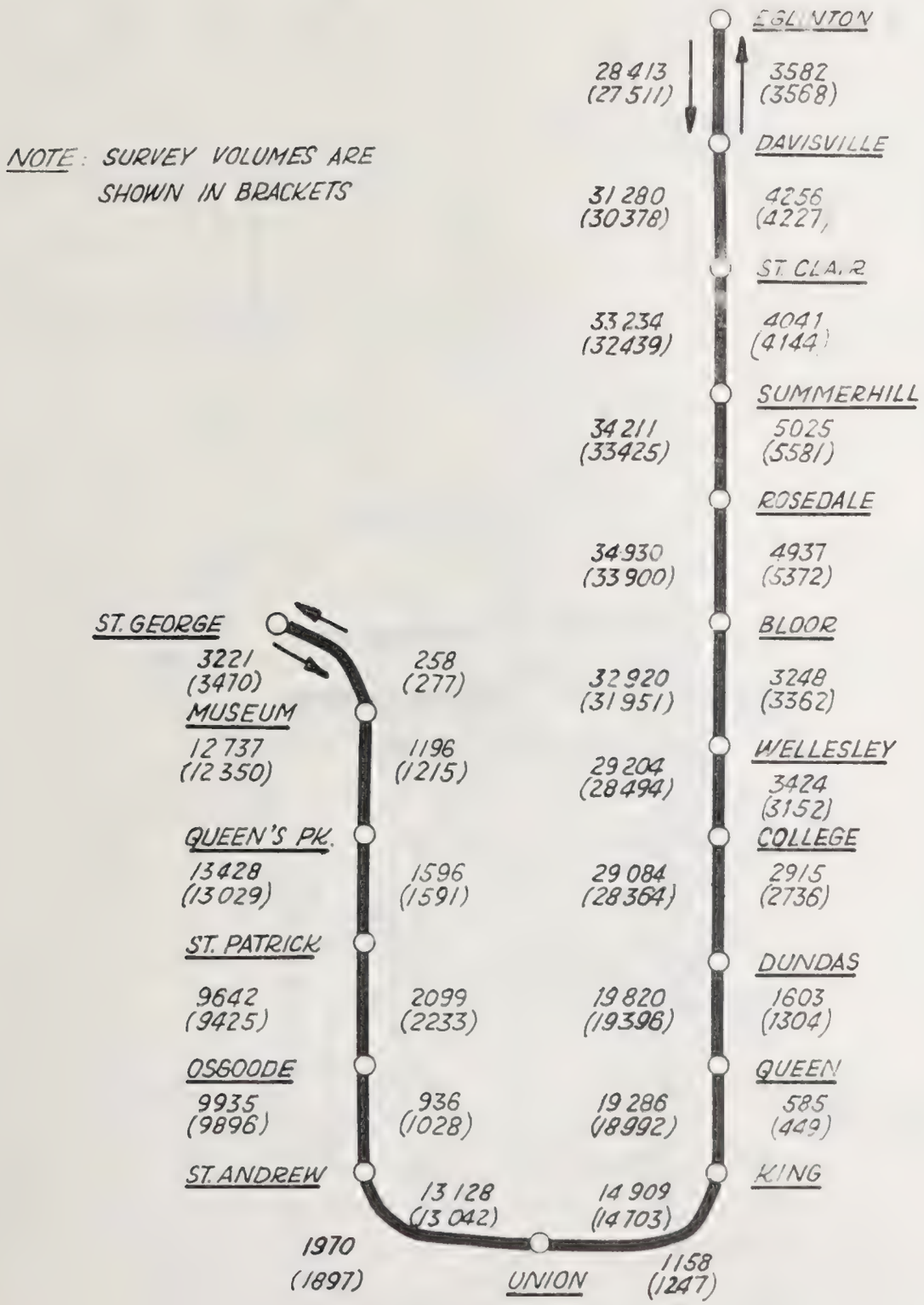


FIG. 17 COMPARISON OF SURVEY AND SIMULATED PERSON TRIP INTERCHANGES TO SUPERZONE 17

FIG. 18

COMPARISON OF SURVEY AND SIMULATED SUBWAY VOLUMES



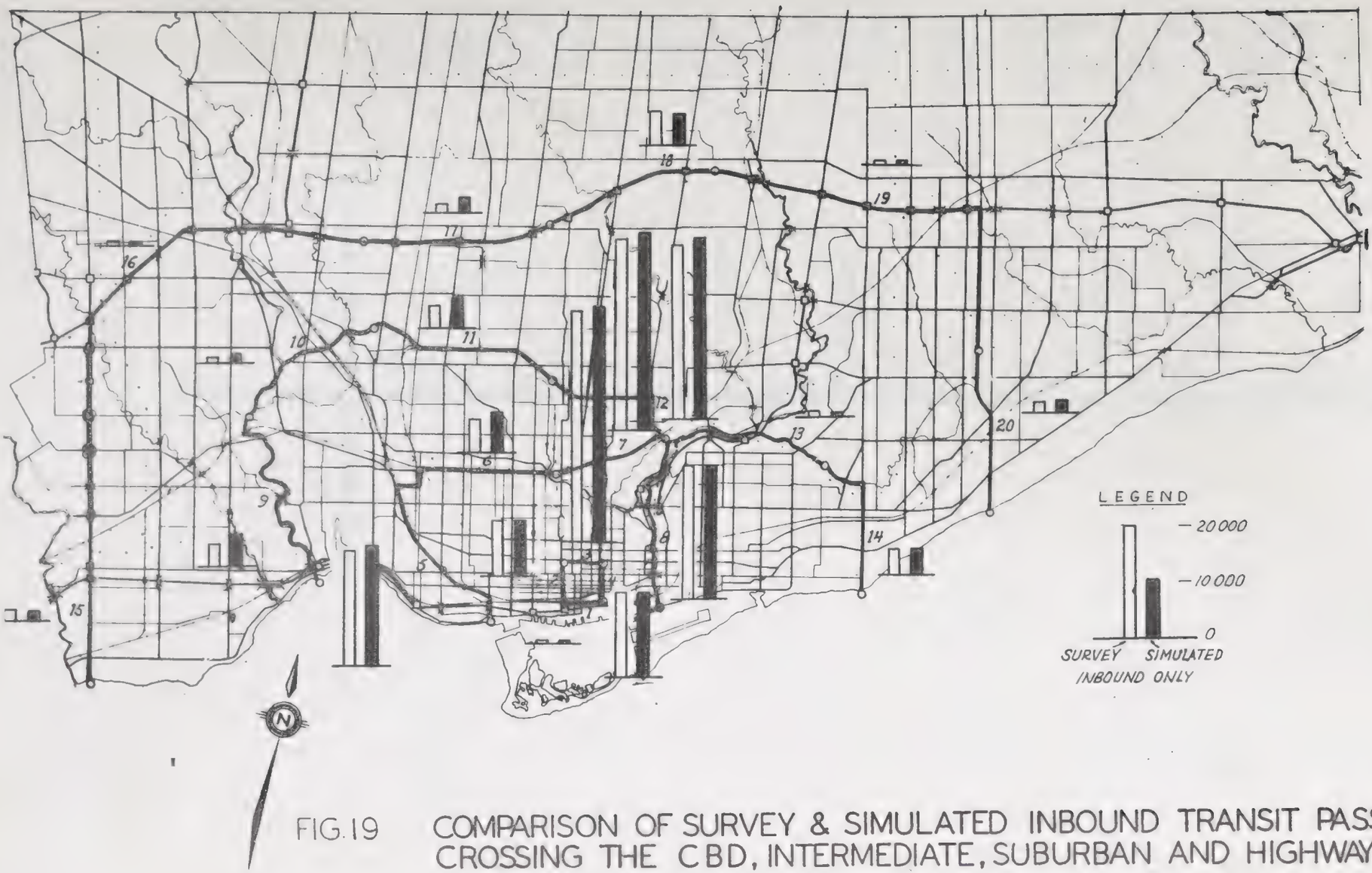
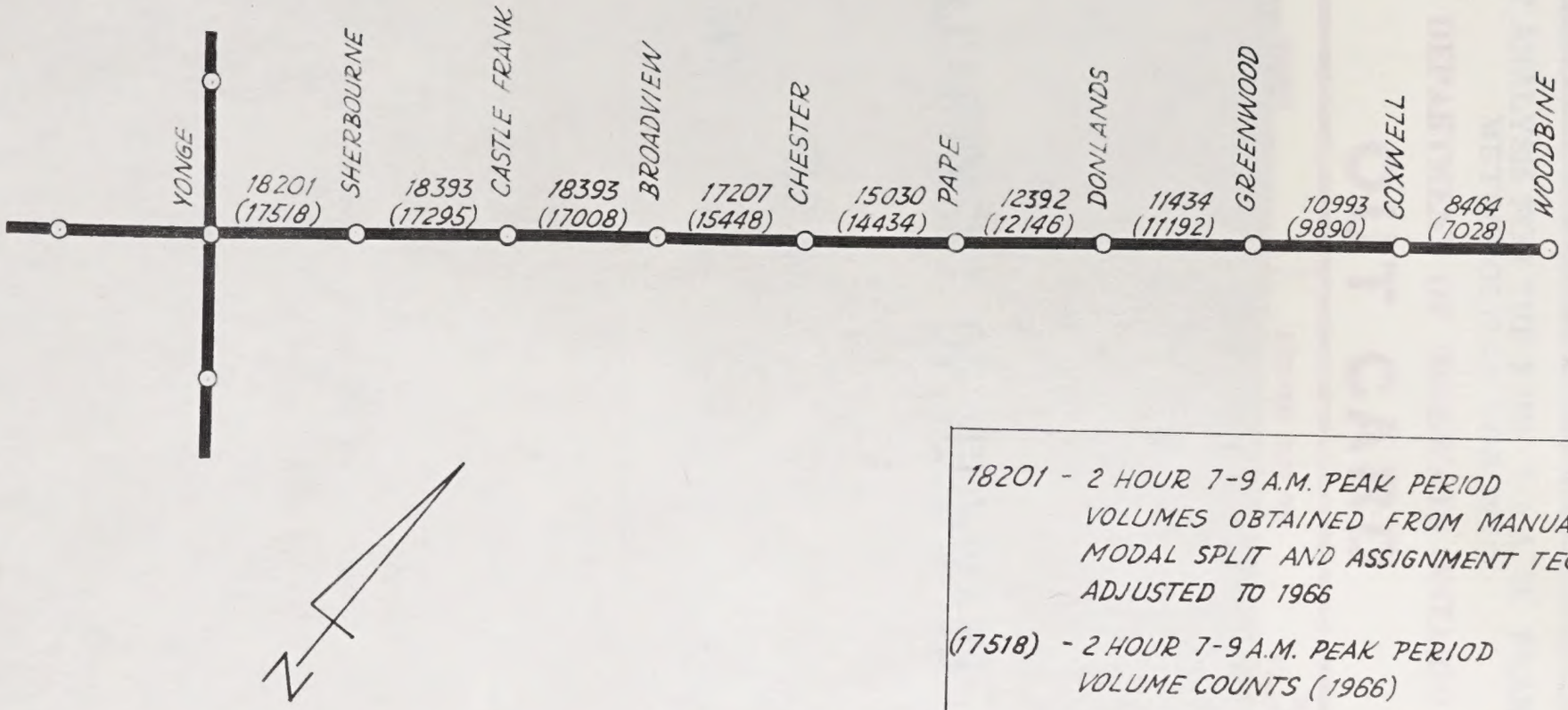


FIG. 19 COMPARISON OF SURVEY & SIMULATED INBOUND TRANSIT PASSENGERS CROSSING THE CBD, INTERMEDIATE, SUBURBAN AND HIGHWAY CORDONS

FIG. 20 COMPARISON OF INBOUND SUBWAY VOLUMES ON BLOOR STREET EAST OF YONGE (1966)



18201 - 2 HOUR 7-9 A.M. PEAK PERIOD VOLUMES OBTAINED FROM MANUAL MODAL SPLIT AND ASSIGNMENT TECHNIQUE ADJUSTED TO 1966

(17518) - 2 HOUR 7-9 A.M. PEAK PERIOD VOLUME COUNTS (1966)

MODAL SPLIT ANALYSIS FOR THE 2 HR. 7-9 A.M. PEAK PERIOD IN METROPOLITAN TORONTO.

Form SB-OS-41

DEPARTMENT OF HIGHWAYS ONTARIO

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DATE	NAME	SIGNED OUT TO	DATE RETURNED OR REASON FOR TAKING FILE

FORM SB-OS-35
10M-58-75

DEPARTMENT OF HIGHWAYS

FILE No._____

REMARKS_____

DATE_____